

**PT1250 Series  
PT1250DC Series  
PT1253R  
PT1250 EX/AMS  
PT1260EX Series  
PT1280 Series  
Heavy-Duty Pan/Tilts**

**Maintenance/  
Service Manual**

**C373SM-A (8/01)**

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## IMPORTANT SAFEGUARDS AND WARNINGS

Prior to installation and use of this product, the following WARNINGS should be observed.

1. Installation and servicing should only be done by qualified service personnel and conform to all local codes.
2. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6 or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
3. Only use replacement parts recommended by Pelco.
4. The installation method and materials should be capable of supporting four times the weight of the enclosure, camera and lens combination.
5. The total load on tilt table shall not exceed 100 lb (45 kg) with the center of gravity at 5 inches above the tilt table surface. The weight and stiffness of explosion-proof cabling must be included in this weight calculation.
6. **PT1250EX/AMS, PT1260EX Series Only**—If used in marine applications, the installation shall be in accordance with the Electrical Engineering Regulations of the U.S.C.G., Subpart J, C.G. 259 (46 CFR Parts 110-113).
7. After replacement/repair of this unit's electrical components, conduct a resistance measurement between line and exposed parts to verify the exposed parts have not been connected to line circuitry.

The product and/or manual may bear the following marks:



This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

**CAUTION:**

RISK OF ELECTRIC SHOCK.  
DO NOT OPEN.

Please thoroughly familiarize yourself with the information in this manual prior to installation and operation.

## DESCRIPTION

All heavy duty pan/tilts can operate with loads up to 100 pounds (45.4 kg). Rugged high-torque motors with adjustable worm-gear final drives ensure long operational life and drift-free operation. All models are manufactured from cast and/or plate aluminum with all internal parts corrosion-protected steel or aluminum.

The PT1250 Series and PT1280 Series are capable of auto/random scan operation with the addition of the Pelco solid-state auto/random scan joystick control.

The PT1253R is equipped with variable frame scan capabilities (adjustable from 2-9 seconds) and interfaces with other manufacturers' control systems for frame scan operation. This pan/tilt can be used in place of the Vicon V390APT pan/tilt.

The PT1250EX/AMS meets the rigorous requirements for weather and dust-proof electrical equipment for installations in salt-air environments.

Pan/tilts in the PT1260EX Series meet the rigorous requirements of explosion-proof and dust-ignition-proof electrical equipment for installation and use in hazardous locations. PT1260EX Series units are suitable for use in salty conditions such as aboard ships and on sea coasts.

## MODELS

### PT1250 Series

PT1250P	Heavy-duty, indoor/outdoor pan/tilt, 120 VAC
PT1250P/220	Same as PT1250P except 230 VAC input
PT1250P/FG	Same as PT1250P except supplied with high-speed gears (12°/6° per sec pan/tilt speed). Reduces load to 50 lb (22.68 kg)
PT1250P/FGP	Same as PT1250P except supplied with special pan-speed gearing (12°/sec pan speed)
PT1250P/HB	Same as PT1250P except supplied with spot heaters in base, blanket heater in cover. Heaters are 120 VAC, 50/60 Hz, 230 watts total, and allow operation to -50°F (-46°C)
PT1250P/HB/FG	Combination of PT1250P/HB and PT1250P/FG
PT1250P/PP	Same as PT1250P except supplied with preset positioning option. Requires preset control or control with AZL option (position-indication meter)
PT1250P/PP/WT	Same as PT1250P/PP except white epoxy polyester powder coat finish
PT1250P/RAD	Same as PT1250P except supplied with radiation-resistant wiring and white epoxy paint. Low-level radiation resistancy

### PT1250DC Series

PT1250DC	Heavy duty, indoor/outdoor pan/tilt, 115 VDC
PT1250DC/FG	Same as PT1250DC except supplied with special high-speed gears (12°/6° per second pan/tilt speed). Reduces total load rating to 50 lb (22.68)
PT1250DC/HB	Same as PT1250DC except supplied with spot heater in base, blanket heater in cover, 120 VAC (230 watts total). Allows operation to -50°F (-46°C)

PT1250DC/PP	Same as PT1250DC except supplied with position feedback modification. Requires preset control or control with AZL option (panel readout meters)
PT1250DC/RAD	Same as PT1250DC except supplied with radiation resistant wiring and white epoxy paint. Low level radiation resistant up to $10^6$ rads
<b><u>PT1253R</u></b>	
PT1253R	Heavy duty, indoor/outdoor pan/tilt, 120 VAC. Equipped with variable frame scan
<b><u>PT1250EX/AMS</u></b>	
PT1250EX/AMS	Heavy duty, indoor/outdoor pan/tilt, 120 VAC, Weather and dust-proof construction for installation in salt-air environments.
<b><u>PT1260EX Series</u></b>	
PT1260EX	Explosion-proof, 120 VAC operation pan/tilt for loads up to 100 lb (45 kg).
PT1260EX/220	Same as PT1260EX except 230 VAC operation
PT1260EX/PP	Same as PT1260EX except supplied with preset position modification (PP)
PT1260EX/PP/230	Same as PT1260EX/PP except 230 VAC operation
<b><u>PT1280 Series</u></b>	
PT1280P	Heavy duty indoor/outdoor pan/tilt, 120 VAC
PT1280P/HB	Same as PT1280P except supplied with spot heaters in base, blanket heater in cover, 230 watts total. 120 VAC, 50/60 Hz
PT1280P/PP	Same as PT1280P except with presets
PT1280SL	Heavy duty indoor/outdoor pan/tilt with SL option (360° pan rotation)
PT1280SL/PP	Same as PT1280SL except with presets

## **OPTIONS**

FGT/1250	Special tilt speed gearing: 6°/sec tilt speed. Reduces load to 50 lb (22.68 kg)
FG/1250P	High speed gears: 12°/sec pan, 6°/sec tilt. Reduces load to 50 lb (22.68 kg)
FGP/1250P	High speed gearing for pan: 12°/sec
FGT/1250P	High speed gearing for tilt: 6°/sec tilt. Reduces load to 50 lb (22.68 kg)
SEC	Sector scan modification allows pan/tilt to auto-scan and manually override in present sector (PT1280P)
HB/1250	Spot heaters in base, blanket heater in cover. 230 watts total. 120 VAC, 50/60Hz allows operation to -50°F (-45.56°C)

## MAINTENANCE

Inspect the pan/tilt unit every six months to ensure trouble-free operation and an extended product life. Harsh environments and/or continuous motion applications may require more frequent maintenance.

Please read all of the instructions that follow before servicing the pan/tilt.

To begin, remove the three screws on the front of the pan/tilt housing and lift the cover to gain access to the pan and tilt motor assemblies.

### TIGHTENING DRIVE CHAINS

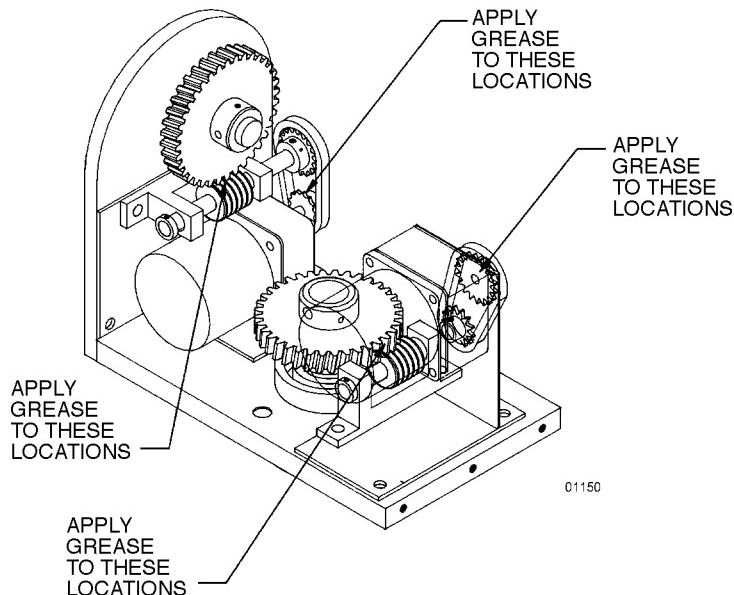
Check the pan and tilt drive chains for tension. A movement of 1/32 of an inch to 3/32 of an inch in the chains is acceptable. If the movement of a chain exceeds 3/32 of an inch, adjust the chain as follows:

1. Loosen the screws securing the motor to the mounting frame.
2. Pry on the motor to apply tension to the chain. Do not over-tension the drive chain.
3. Keep tension on the chain while tightening the screws.

### CHAIN DRIVE LUBRICATION

Sprockets, chains, and gears should be well greased. If necessary, lubricate the pan and tilt gears, sprockets, and chains as follows with a high-quality grease capable of withstanding temperatures from -50° to 170°F (-46° to 77°C). Do the following:

1. Liberally apply grease to the pan and tilt gears, chains, and sprockets (refer to Figure 1).
2. Operate the pan and tilt motors to spread the grease across the parts.
3. Apply additional grease if necessary.
4. Reinstall the cover. If the pan/tilt is installed outdoors in an inverted position, apply RTV silicone sealant as shown in Figure 2 (except PT1250EX/AMS and PT1260EX Series).



**Figure 1.** Servicing the Pan/Tilt

## RESETTING POTENTIOMETERS

**IMPORTANT:** Be very careful when resetting potentiometer switches. Be sure that the pan/tilt has been centered between maximum pan and tilt travel, regardless of the adjustable limit stops. Failure to observe caution when resetting potentiometers could result in damage to the preset positioning ability of the pan/tilt.



**WARNING:** NEVER reposition the pan fixed limit stop. Doing so WILL DAMAGE the wiring harness and, if the pan/tilt has preset positioning, COULD cause the pan potentiometer to BREAK.

### Models with Preset Positioning (PP)

Models with preset positioning (PP) use potentiometer switches that are factory set to the full range of pan and tilt travel. Under normal operating conditions and at routine service intervals they do not need adjusting.

Should your pan/tilt require any work on the drive mechanism other than routine maintenance, perform the following procedure to reset the potentiometers.

To begin, remove the cover to gain access to the pan and tilt motor assemblies.

1. Remove the potentiometer gears and position the pan/tilt to the middle of its maximum pan and tilt travel, regardless of the position of the adjustable limit stops. That is, the tilt table should be level and the fixed limit stop should be opposite the limit switch.
2. Turn a potentiometer all the way in one direction until it stops, then observing the number of turns, turn it back the other way until it stops. Rotate the potentiometer half the number of turns the other way to reach the center.
3. Replace the potentiometer gear.
4. Perform steps 2 and 3 for the other potentiometer.

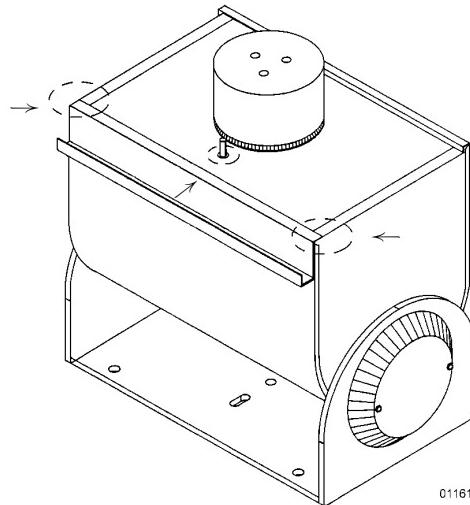


Figure 2. Sealant Locations

## MOTOR BRAKE REPLACEMENT



**WARNING:** The knife-blade included in the brake kit is very sharp. It should be handled carefully and disposed of properly after use.

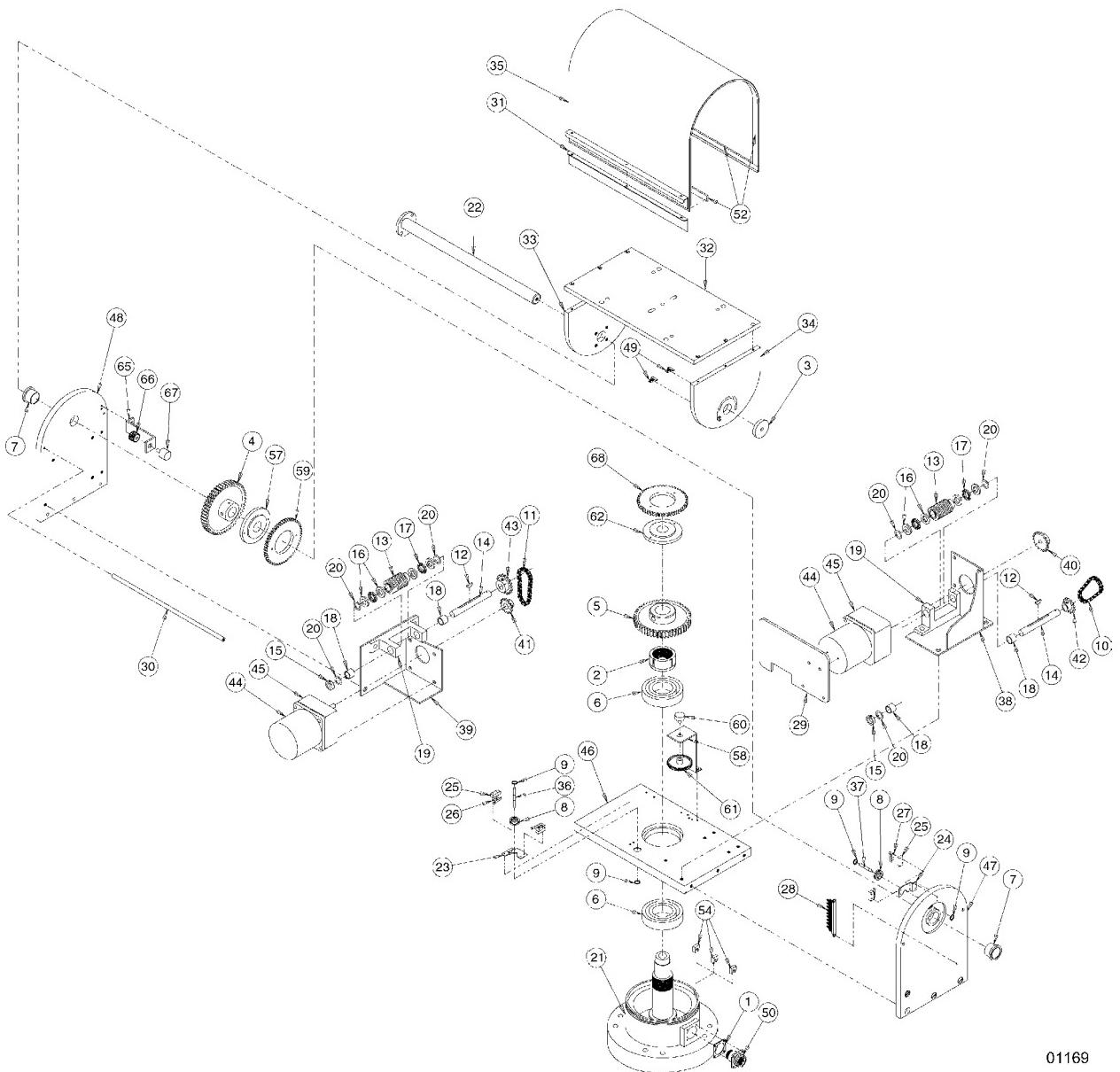
**NOTE:** This section does not apply to the PT1250DC Series.

To order replacement motor brakes, specify part number 1250BRAKE. The kit consists of four springs, four Teflon pads, two screws, and a small knife-blade for removing the old brake pads.

1. Remove the large rectangular heat sink from the back of the pan motor. Remove the four springs. Do not disturb the silicone heat sink compound. It ensures the transfer of heat to the heat sink and MUST be present when the heat sink is replaced.
2. Use the knife blade to remove the worn pads, as follows:
  - a. Insert the knife blade into the opening and press firmly into the brake pad.
  - b. Before trying to remove the brake pad, twist the knife-blade. This will loosen the worn pad and make removal easier.
  - c. Gently twist the blade as you pull the worn pad out.
3. Insert the four new brake pads and four springs. Replace the heat sink using the new screws.

Reinstall the cover. If your pan/tilt is installed outdoors in an inverted position, apply RTV silicone sealant to the areas circled in Figure 2 (except PT1250EX/AMS and PT1260EX Series).

# **EXPLODED ASSEMBLY DIAGRAMS**



**Figure 3.** PT1250 Series Exploded Assembly Diagram (Mechanical Parts)

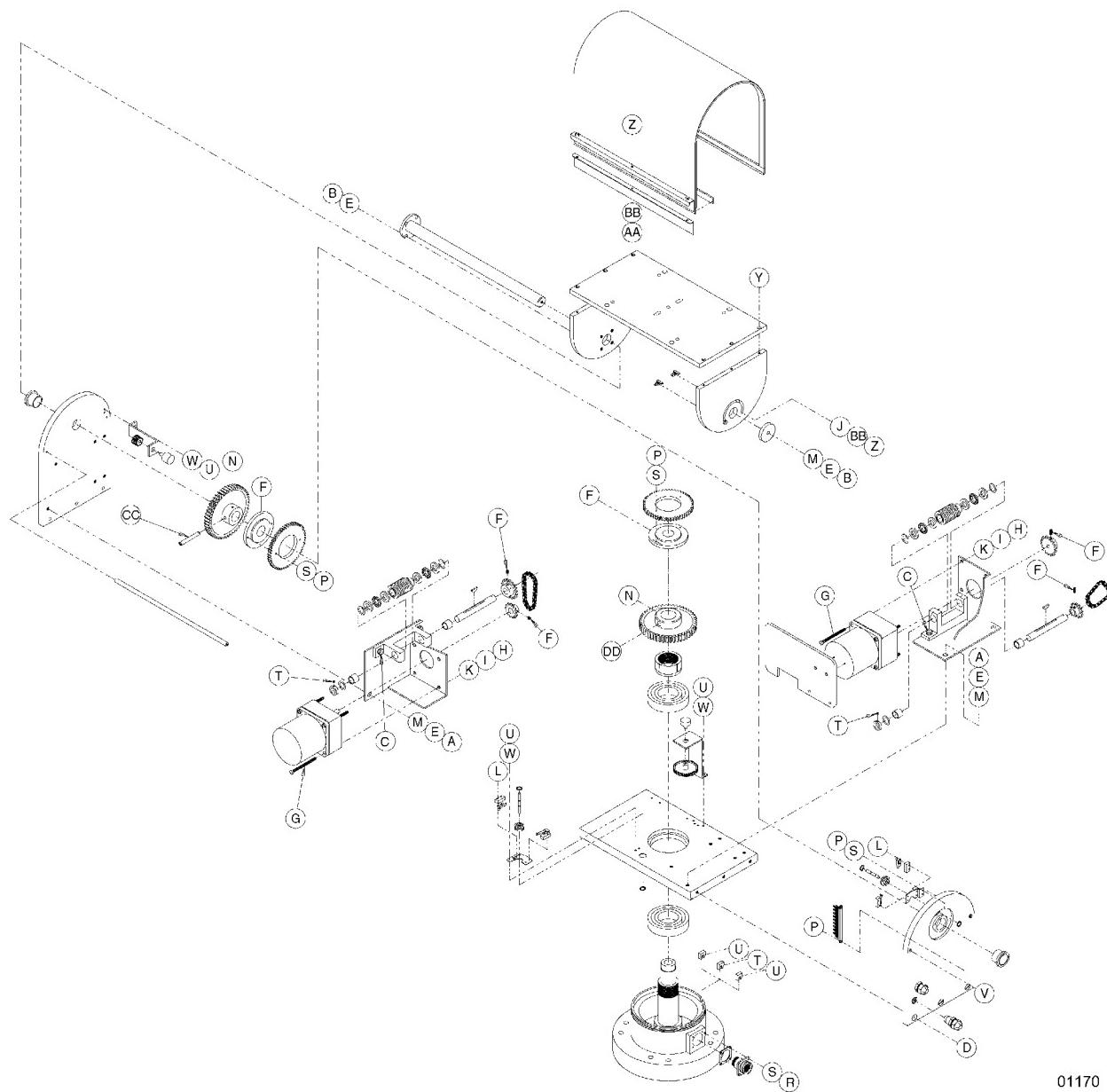
**Table A. PT1250 Series Mechanical Parts List**

Item	Qty	Description	Part Number
1	1	Gasket	105010010
2	1	Pan spindle nut	10504017COMP
3	1	Thrust cap (except WT, RAD models)	10504076COMP
	1	Thrust cap (WT and RAD only)	10504076WCOMP
4	1	Tilt gear	10504084COMP
5	1	Pan gear	10504089COMP
6	2	Bearing	10506009
7	2	Bearing	10506010
8	2	Grommet	125010000
9	4	Retainer clip	125010001
10	1	Pan chain assembly (except 220, FG, FGP models)	12501010COMP
	1	Pan chain assembly (FG and FGP only)	12501020COMP
	1	Pan chain assembly (220 only)	12501221COMP
11	1	Tilt chain assembly (except 220 , FG, FGP models)	12501011COMP
	1	Tilt chain assembly (FG and FGP only)	12501001COMP
	1	Tilt chain assembly (220 only)	12501220COMP
12	2	Key	105010015
13	2	Worm gear	105012010
14	2	Shaft (except 220 model)	10504078COMP
	2	Shaft (220 only)	20004110COMP
15	2	Thrust collar	10504085COMP
16	8	Bearing washer	10506005
17	4	Bearing cage	10506006
18	4	Bearing	10506007
19	2	Gear train bracket	12504079COMP
20	8	Arbor shim	ZHSHIM.004
21	1	Spindle base assembly (except WT, RAD models)	12501041ACOMP
	1	Spindle base assembly (WT and RAD only)	12501041AWCOMP
22	1	Tilt shaft assembly	12501043COMP
23	1	Pan limit bracket	12504100COMP
24	1	Tilt limit bracket	1554052COMP
25	4	Switch	SWI1SM1
26	2	Pan switch actuator with insulation	SWIJS221
27	2	Tilt switch actuator with insulation	SWIJS138B
28	1	9-pin terminal strip	TRS2009
29	1	Heat sink (except 220, RAD models)	12504010ACOMP
30	2	Spacer rod	12504110COMP
31	1	Pull-up bar (except WT, RAD models)	12504111COMP
	1	Pull-up bar (WT and RAD only)	12504111WCOMP
32	1	Tilt table top (except WT, RAD models)	12504116COMP
	1	Tilt table top (WT and RAD only)	12504116WCOMP
33	1	Tilt table side (except WT, RAD models)	12504117COMP
	1	Tilt table side (WT and RAD only)	12504117WCOMP
34	1	Tilt table side (limit stops) (except WT, RAD models)	12504118COMP
	1	Tilt table side (limit stops) (WT and RAD only)	12504118WCOMP
35	1	Cover (except WT, RAD models)	12504119BWA
	1	Cover (WT and RAD only)	12504119WA
36	1	Pan limit pin	12504120ACOMP
37	1	Tilt limit pin	12504121ACOMP
38	1	Pan motor plate (except 220 model)	12504123COMP
	1	Pan motor plate (220 only)	12504220COMP
39	1	Tilt motor plate (except 220 model)	12504123TCOMP
	1	Tilt motor plate (220 only)	12504221COMP
40	1	Pan motor sprocket (except 220, FG, FGP models)	12504124COMP
	1	Pan motor sprocket (FG and FGP only)	1504016 COMP
	1	Pan motor sprocket (220 only)	12504226COMP
41	1	Tilt motor sprocket (except 220, FG models)	12504125COMP
	1	Tilt motor sprocket (220 only)	28012011
	1	Tilt motor sprocket (FG only)	12504124COMP
42	1	Pan sprocket	12504126COMP

*Continued on next page*

**Table A.** PT1250 Series Mechanical Parts List (Continued)

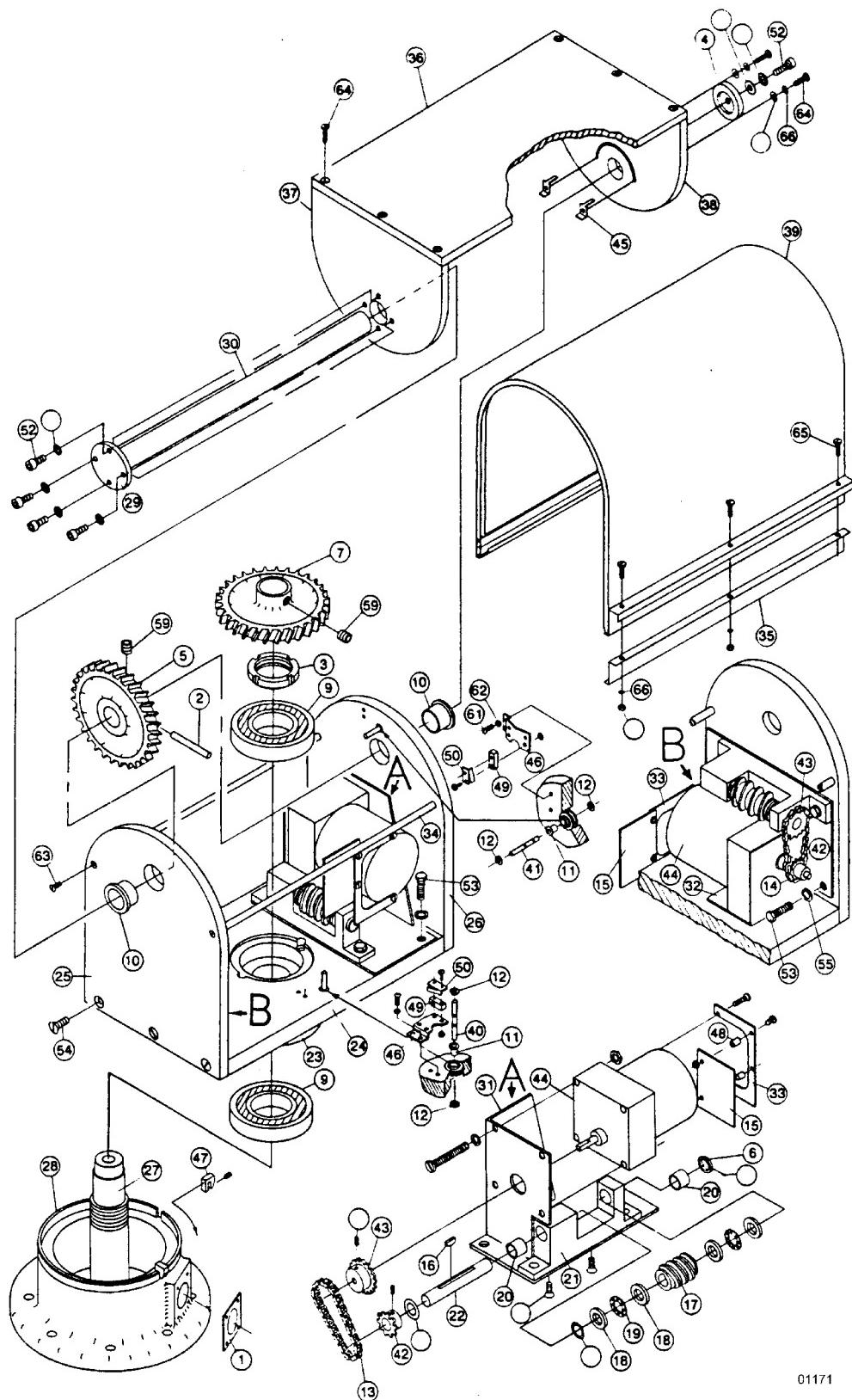
Item	Qty	Description	Part Number
43	1	Tilt sprocket (except 220, FG models)	12504127COMP
	1	Tilt sprocket (220 only)	12504227COMP
	1	Tilt sprocket (FG only)	12504126COMP
44	2	Motor, 120 VAC (except 220 model)	12508110
	2	Motor, 230 VAC (220 only)	12508115
45	2	Gear head (except 220 model)	12508111
	2	Gear head (220 only)	12508114
46	1	Bottom plate	12504112ACOMP
47	1	Side plate, tilt side (except WT, RAD models)	12504115COMP
	1	Side plate, tilt side (WT and RAD only)	12504115WCOMP
48	1	Side plate, pan side (except WT, RAD models)	12504114ACOMP
	1	Side plate, pan side (WT and RAD only)	12504114AWCOMP
49	2	Tilt limit stop	1554055COMP
50	1	7-pin male connector (RAD model)	MS3102E16S1P
	1	9-pin male connector (P, 220, FG, FGP models)	CON206705-1
	1	16-pin male connector (PP, WT, HB models)	CON206036-1
51		Not used	
52	7	Gasket, 1/8" x 1/2" x feet (except FG, FGP models)	EH550010030
	2	Gasket, 1/8" x 1/2" x feet (FG and FGP only)	EH550010030
53		Not used	
54	3	Pan limit stop	58010006
55		Not used	
56		Not used	
		The following items are for the PP and WT models only:	
57	1	Collar, tilt AZL gear	12504020COMP
58	1	AZL potentiometer bracket	12504003COMP
59	1	Gear, AZL collar	12504104
60	1	Potentiometer, 5K ohm	POT005.0K10534
61	1	Gear potentiometer	TV12000
62	1	Collar, pan AZL gear	12504001COMP
63		Not used	
64		Not used	
65	1	AZL potentiometer bracket	12504003COMP
66	1	Gear	TV12000
67	1	Potentiometer, 5K ohm	POT005.0K10534
68	1	Gear, AZL collar	12504104
		The following items are for the HB model only but are not shown:	
	1	Cover heater blanket, 120 VAC	105010000
	2	Base heater blanket, 120 VAC	EH110065A
	1	Thermostat	EH5510049A



**Figure 4.** PT1250 Series Exploded Assembly Diagram (Hardware)

**Table B.** PT1250 Series Hardware List

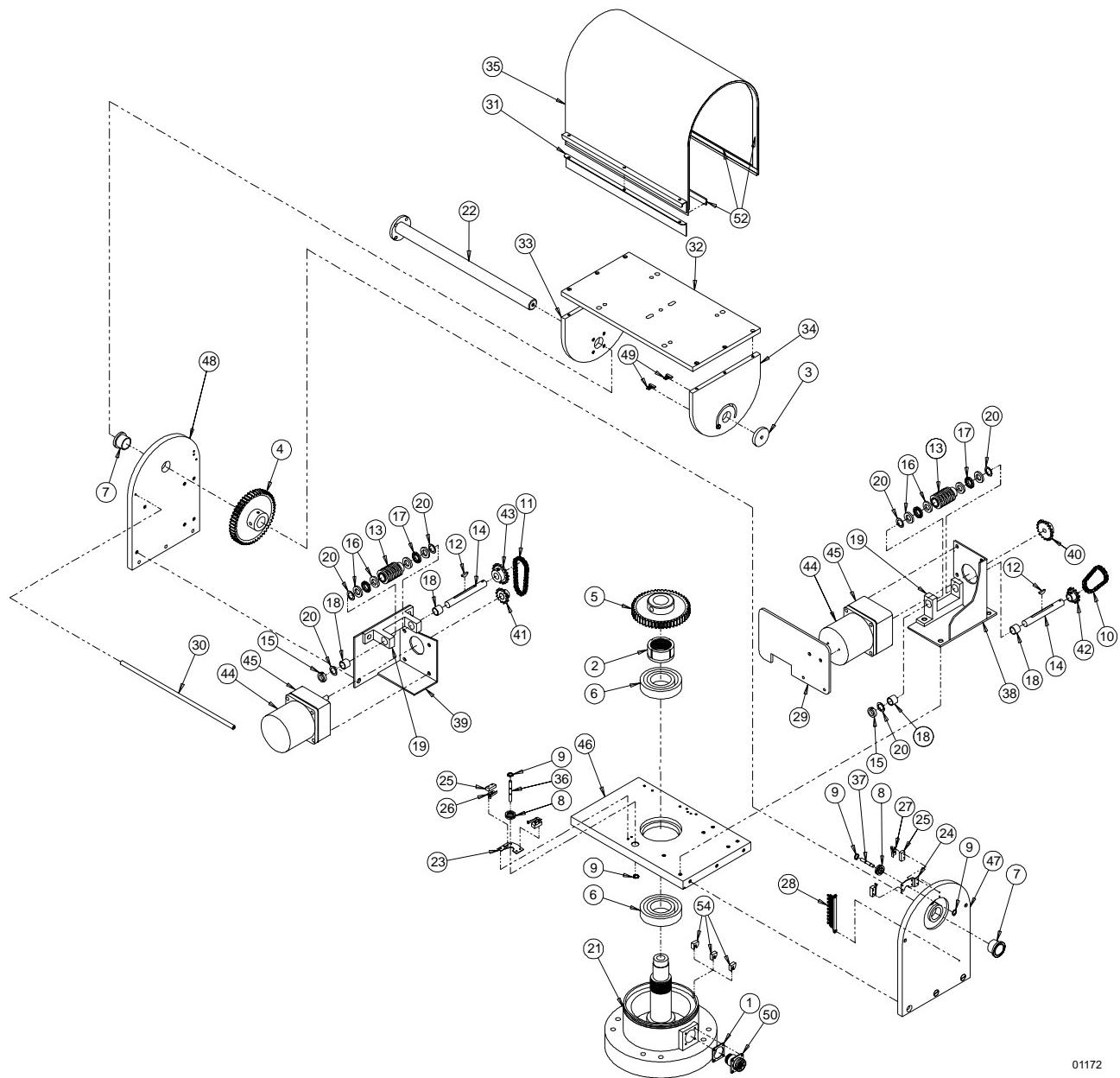
Item	Qty	Description	Part Number
A	4	Screw, 1/4-20 x 1/2"	ZH1/420X.500CH
B	5	Allen bolt, 1/4-20 x 5/8"	ZH1/420X.625CS
C	4	Bolt, 1/4-20 x 3/4"	ZH1/420X.750CH
D	6	Screw 1/4-20 x 1", flat-head, Phillips	ZH1/420X1.00SFS
E	9	Split lock washer, 1/4"	ZH1/4LWSSL
F	4	Set screw, 10-32 x 3/16" (except PP, WT models)	ZH10-32X.187S
	6	Set screw, 10-32 x 3/16" (PP and WT only)	ZH10-32X.187S
G	8	Screw, 10-32 x 2 1/4", pan head, Phillips	ZH10-32X2.25SPS
H	8	Nut, 10-32	ZH10-32NUTSH
I	8	Split lock washer, #10	ZH10LWSSL
J	2	Flat washer, #8	ZH188X435X60C
K	8	Flat washer, #10	ZH204X436X60C
L	8	Screw, 2-56 x 7/16", pan head, Phillips	ZH2-56X.437SPP
M	5	Flat washer, 3/16"	ZH260X562X65C
N	2	Set screw, 3/8-24 x 3/8"	ZH3/8-24X.375S
P	4	Screw, 4-40 x 1/4", pan head, Phillips (except PP, WT)	ZH4-40X.250SPP
	8	Screw, 4-40 x 1/4", pan head, Phillips (PP, WT only)	ZH4-40X.250SPP
R	4	Screw, 4-40 x 3/8", pan head, Phillips	ZH4-40X.375SPP
S	6	Internal tooth lock washer, #4 (except PP, WT)	ZH4LWSIS
	10	Internal tooth lock washer, #4 (PP and WT only)	ZH4LWSIS
T	3	Set screw, 6-32 x 3/16"	ZH6-32X.187S
U	4	Screw, 6-32 x 3/8", pan head, Phillips (except PP, WT)	ZH6-32X.375SPP
	6	Screw, 6-32 x 3/8", pan head, Phillips (PP, WT only)	ZH6-32X.375SPP
V	4	Screw, 6-32 x 3/4" flat head, Phillips	ZH6-32X.750SFS
W	2	Split lock washer, #6 (except PP, WT)	ZH6LWSIS
	6	Split lock washer, #6 (PP and WT only)	ZH6LWSIS
X		Not used	
Y	6	Allen screw, 8-32 x 1/2"	ZH8-32X.500CS
Z	5	Screw, 8-32 x 5/8", pan head, Phillips	ZH8-32X.625SPP
AA	3	Nut, 8-32	ZH8-32NUTSH
BB	5	Internal star washer, #8	ZH8LWSIS
CC	1	Tapered pin, #5 x 2 1/2"	105010017
DD	1	Dowel pin, 3/16" x 5/8"	ZHPIN3/16X5/8



**Figure 5.** PT1250DC Series Exploded Assembly Diagram

**Table C.** PT1250DC Series Parts List

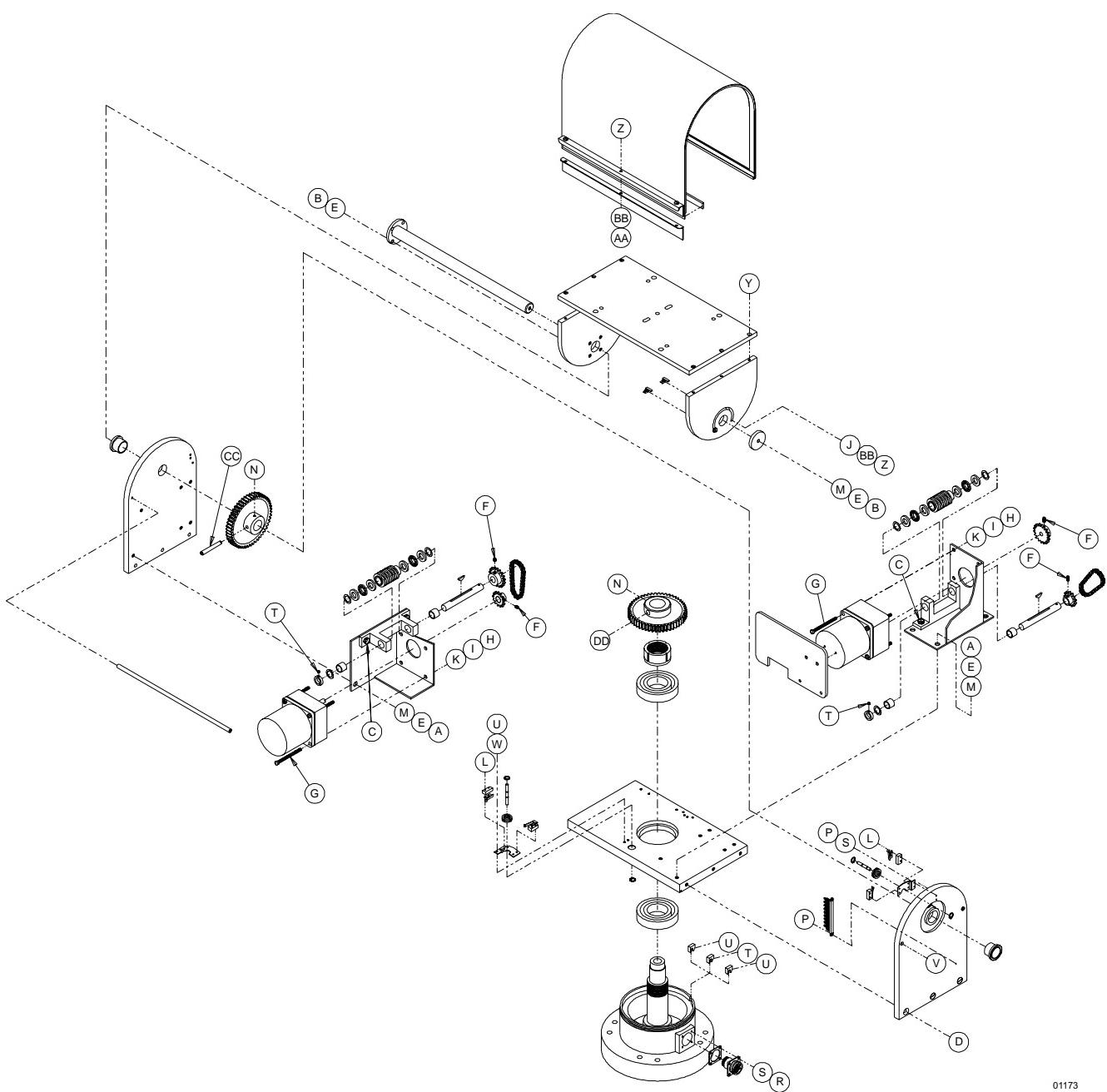
Item	Qty	Description	Part Number
1	1	Gasket connector	105010010
2	1	Pin tapper #5 x 2"	105010017
3	1	Nut, pan spindle	10504017COMP
4	1	Thrust cap	10504076COMP
5	1	Gear tilt	10504084COMP
6	2	Thrust collar	10504085COMP
7	1	Gear, pan	10504089COMP
8	—	(Not used)	
9	2	Bearing	10506009
10	2	Bearing	10506010
11	2	Mount limit pin	125010000
12	4	Clip retainer	125010001
13	1	Chain assembly, pan motor	12501000COMP
14	1	Chain assembly, tilt motor	12501001COMP
15	2	PC board assembly filter	12501003COMP
16	2	Key, Woodruff #3	105010015
17	2	Gear, worm pan/tilt	105012010
18	8	Bearing, A016 washer only	10506005
19	4	Bearing, A016C cage only	10506006
20	6	Bearing	10506007
21	2	Bracket, gear train	12504079COMP
22	2	Shaft, gear train	20004110COMP
23	1	Bearing, boss	10504069COMP
24	1	Bottom plate	12504113ACOMP
25	1	Pan side plate	12504114ACOMP
26	1	Tilt side plate	12504115ACOMP
27	1	Spindle	10504074COMP
28	1	Base	12504112ACOMP
29	1	Flange, tilt	10504077COMP
30	1	Shaft, tilt (less flange)	12504122COMP
31	1	Plate, pan motor	12504006COMP
32	1	Plate, tilt motor	12504007COMP
33	2	Bracket, circuit board	12504009COMP
34	2	Spacer, rod	12504110COMP
35	1	Pull-up bar	12504111COMP
36	1	Tilt table top	12504116COMP
37	1	Table, side tilt 4H	12504117COMP
38	1	Table, side tilt 1H	12504118COMP
39	1	Cover	12504119BWA
40	1	Pin limit, pan	12504120ACOMP
41	1	Pin limit, tilt	12504121ACOMP
42	2	Sprocket, pan gear train	12504126ACOMP
43	2	Sprocket, tilt gear train	12504127ACOMP
44	2	Motor	MR02-0002-3104
45	2	Tilt limit stop	1554050COMP
46	2	Bracket, tilt limit	1554052COMP
47	3	Limit stop pan, univ pan/tilt	58010006
48	4	Spacer, 1/4 O.D. x .375 ##6, clear	SPA2101
49	4	Switch	SWI1SM1
50	2	Pan switch actuator w/insulator	SWIJS138B
	2	Tilt switch actuator w/insulator	SWIJS221
51	4	Screw, 1/4-20 x 1/2" Hex CAD	ZH1/4-20X.500CH
52	5	Bolt, 1/4-20 x 5/8" SOC SS	ZH1/420X.625CS
53	4	Bolt, 1/4-20 x 3/4" Hex CAD	ZH1/420X.750CH
54	6	Screw, 1/4-20 x 1" Flat slot SS	ZH1/420X1.00SFS



**Figure 6.** PT1253R Exploded Assembly (Mechanical Parts)

**Table D. PT1253R Mechanical Parts List**

Item	Qty	Description	Part Number
1	1	Gasket, connector	105010010
2	1	Nut, pan spindle black no. 8	10504017COMP
3	1	Thrust cap	10504076COMP
4	1	Gear, tilt	10504084COMP
5	1	Gear, pan	10504089COMP
6	2	Bearing 6208-ZZ	10506009
7	2	Bearing FB1416-6	10506010
8	2	Mount grommet LOR00	125010000
9	4	Clip retainer	125010001
10	1	Chain, assy pan	12501010COMP
11	1	Chain, assy tilt	12501011COMP
12	2	Key, Woodruff #3 alloy	105010015
13	2	Gear, worm pan	105012010
14	2	Pan shaft	10504078COMP
15	2	Thrust collar	10504085COMP
16	8	Bearing AO16, washer only	10506005
17	4	Bearing AO16C, cage only	10506006
18	4	Bearing B810-4	10506007
19	2	Bracket, gear train	12504079COMP
20	6	Shim arbor	ZHSHIM.004
21	1	Base, spindle assy	12501041ACOMP
22	1	Tilt, shaft assy	12501043COMP
23	1	Pan limit bracket	12504100COMP
24	1	Tilt limit bracket	1554052COMP
25	4	Switch	SWI1SM1
26	2	Switch actuator w/ insulation	SWIJS138B
27	2	Switch actuator, long w/insulation	SWIJS221
28	1	Terminal strip, 9 position	TRS2009
29	1	Heat sink	12504010ACOMP
30	2	Spacer rod	12504110COMP
31	1	Pull up bar	12504111COMP
32	1	Tilt table, top	12504116COMP
33	1	Table, side tilt 4H	12504117COMP
34	1	Table, side tilt 1H	12504118COMP
35	1	Cover	12504119BWA
36	1	Pin, limit pan	12504120ACOMP
37	1	Pin, limit tilt	12504121ACOMP
38	1	Plate, motor pan	12504123COMP
39	1	Plate, motor tilt	12504123TCOMP
40	1	Sprocket, 25B18-5/16" W/SS	12504124COMP
41	1	Sprocket, motor tilt	12504125COMP
42	1	Sprocket, 25B13 1/2" bore w/ set screw	12504126COMP
43	1	Sprocket, 25B18 1/2" bore w/ set screw	12504127COMP
44	2	Motor, 120V	12508110
45	2	Gear head	12508111
46	1	Bottom plate assy	12504112ACOMP
47	1	Tilt, side plate	12504115COMP
48	1	Pan, side plate	12504114ACOMP
49	2	Tilt, limit stop	1554050COMP
50	1	Conn CPC 16 pos pin recip	CON206036-1
51	1	PCB Assy, Frame Scan (not shown)	12501007ACOMP
52	7 ft.	Gasket, poron 1/8 x 1/2, black	EH550010030
53		Not Used	
54	3	Limit stop, pan	58010006

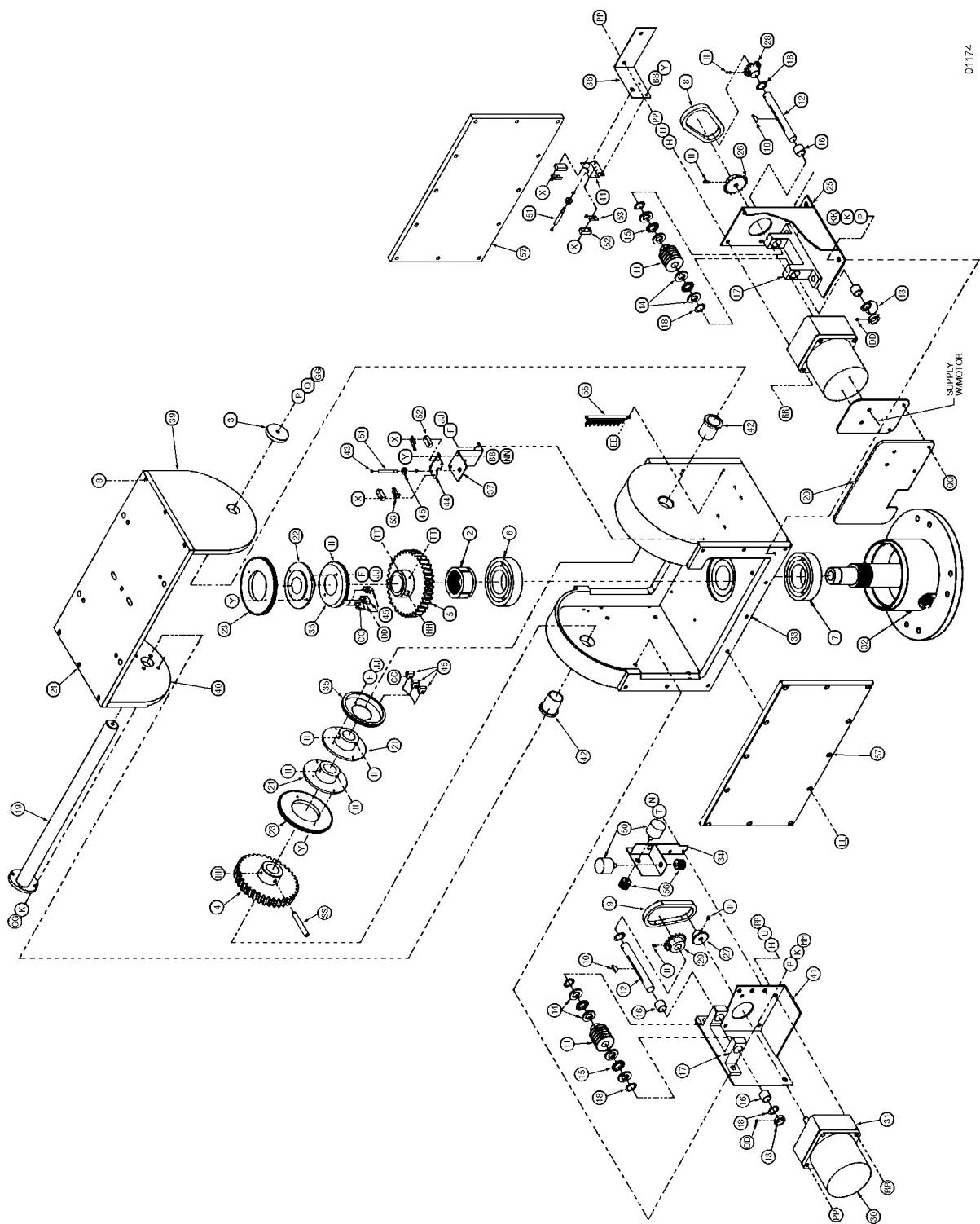


**Figure 7.** PT1253R Exploded Assembly (Hardware)

**Table E.** PT1253R Hardware List

Item	Qty	Description	Part Number
A	4	Screw, 1/4-20 x .500 soc	ZH1/420X.500CS
B	5	Bolt, 1/4-20 x 5/8" sock SS	ZH1/420X.625CS
C	4	Bolt, 1/4-20 x 3/4" hex SS	ZH1/420X.750CH
D	6	Screw, 1/4-20 x 1" flat phil SS	ZH1/420X1.00SFS
E	9	Washer, split lock 1/4" SS	ZH1/4LWSSL
F	4	Set screw, 10-32 x 3/16" soc knur blk	ZH10-32X.187S
G	8	Screw, 10-32 x 2 1/4" phil pan SS	ZH10-32X2.25SPS
H	8	Nut, hex 10-32 SS	ZH10-32NUTSH
I	8	Washer, split lock #10 SS	ZH10LWSSL
J	2	Washer, flat #8 SS	ZH188X435X60C
K	8	Washer, flat #10	ZH204X436X60C
L	8	Screw, 2-56 x 7/16" pan phil SS	ZH2-56X.437SPP
M	5	Washer, flat 3/16" SS	ZH260X562X65C
N	2	Set screw, 3/8-24 x 3/8" soc knur blk	ZH3/8-24X.375S
P	4	Screw, 4-40 x 1/4" pan phil SS	ZH4-40X.250SPP
R	4	Screw, 4-40 x 3/8" pan phil SS	ZH4-40X.375SPP
S	6	Washer, lock #4 internal tooth SS	ZH4LWSIS
T	3	Set screw, 6-32 x 3/16" soc knur blk	ZH6-32X.187S
U	6	Screw, 6-32 x 3/8" pan phil SS	ZH6-32X.375SPP
V	4	Screw, 6-32 x 3/4" flat phil SS	ZH6-32X.750SFS
W	4	Washer, split lock #6	ZH6LWSIS
X	3	Screw, 8-32 x 3/8" pan phil SS	ZH8-32X.375SPP
Y	6	Screw, 8-32 x 1/2" soc SS	ZH8-32X.500CS
Z	5	Screw, 8-32 x 5/8" pan phil SS	ZH8-32X.625SPP
AA	3	Nut, hex 8-32 SS	ZH8-32NUTSH
BB	5	Washer, internal star #8 SS	ZH8LWSIS
CC	1	Taper pin, #5 x 2 1/2"	ZHPIN#5X21/2
DD	1	Pin, dowel 3/16" x 5/8"	ZHPIN3/16X5/8

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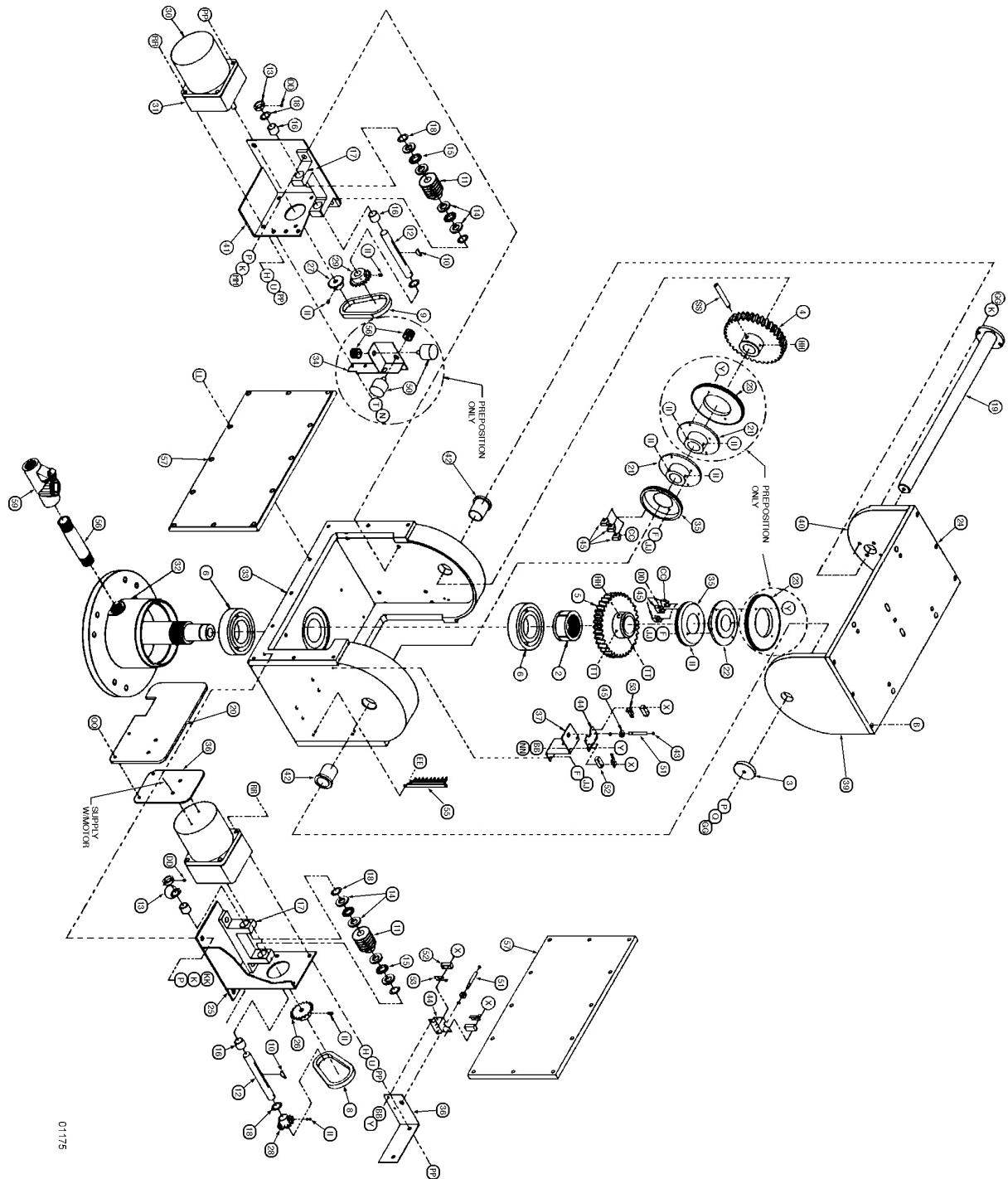
**Table F.** PT1250EX/AMS Parts List

Item	Qty	Description	Part Number
1		Not used	
2	1	Pan spindle nut	10504017COMP
3	1	Thrust cap	10504076WCOMP
4	1	Tilt gear	10504084COMP
5	1	Pan gear	10504089COMP
6	1	Upper pan shaft bearing	10506009
7	1	Lower pan shaft bearing	10506012
8	1	Pan chain assembly	12501010COMP
9	1	Tilt chain assembly	12501011COMP
10	2	Key	105010015
11	2	Worm gear	105012010
12	2	Worm gear shaft	10504078COMP
13	2	Thrust collar	10504085COMP
14	8	Bearing washer	10506005
15	4	Bearing cage	10506006
16	4	Bearing	10506007
17	2	Gear train bracket	12504079COMP
18	8	Arbor shim	ZHSHIM.004
19	1	Tilt shaft	12501043SSCOMP
20	1	Heat sink	12504010ACOMP
21	2	Tilt collar	12504020COMP
22	1	Mounting for pan limit ring and preset position gear	12504101COMP
23	2	Preset position gear	12504104
24	1	Tilt table top	12504116WCOMP
25	1	Pan motor plate	12504123COMP
26	1	Sprocket	12504124COMP
27	1	Sprocket	12504125COMP
28	1	Sprocket	12504126COMP
29	1	Sprocket	12504127COMP
30	2	120 VAC motor	12508110
31	2	Gear head	12508111
32	1	Spindle base	1250EX1043COMP
33	1	Body	1250EX1141WCOMP
34	1	Potentiometer bracket	12550EX4003WA
35	2	Limit stop ring	1250EX4005COMP
36	1	Tilt switch bracket	1250EX4006COMP
37	1	Pan switch bracket	1250EX4007COMP
38	1	Heat sink bracket	1250EX4008COMP
39	1	Tilt table side plate, tilt side	1250EX4213WCOMP
40	1	Tilt table side plate, pan side	1250EX4116WCOMP
41	1	Tilt motor plate	1250EX4123TCOMP
42	2	Bushing	1250EX6000
43	4	Retainer clip	125010001
44		Not used	
45	6	Limit stop	58010006
46-48		Not used	
49	2	Grommet	GRO2172N
50	2	Potentiometer, 5K ohm	POT005.0K10534
51	2	Actuator pin	PT18044020COMP
52	4	Switch	SWI1SM1
53	4	Actuator with insulator	SWIJS138B
54		Not used	
55	1	Terminal strip	TRS2009
56	2	Gear	TV12000
57	2	Cover	1250EX4218WCOMP
	2	Cover gasket (not shown)	1250EX10002

*Continued on next page*

**Table F. PT1250EX/AMS Parts List (Continued)**

Item	Qty	Description	Part Number
A		Not used	
B	6	Allen screw, 8-32 x 1/2"	ZH8-32X.500CS
C-E		Not used	
F	6	Internal star lock washer, #6	ZH6LWSIS
G		Not used	
H	8	Flat washer, #10	ZH204X436X60C
I-J		Not used	
K	12	Split lock washer, 1/4"	ZH1/4LWSSL
L-M		Not used	
N	3	Allen screw, 6-32 x 3/8"	ZH6-32X.375CS
O		Not used	
P	9	Flat washer, 3/16"	ZH260X562X65C
Q	1	Internal star lock washer, 1/4"	ZH1/4LWSIS
R-S		Not used	
T	3	Split lock washer, #6	ZH6LWSSL
U	8	Split lock washer, #10	ZH10LWSSL
V-W		Not used	
X	8	Screw, 2-56 x 7/16", pan head	ZH2-56X.437SPP
Y	8	Screw, 4-40 x 3/8", pan head	ZH4-40X.375SPP
Z-AA		Not used	
BB	4	Internal star lock washer, #4	ZH4LWSIS
CC	5	Screw, 6-32 x 3/8", pan head	ZH6-32X.375SPP
DD	3	Set screw, 6-32 x 3/16"	ZH6-32X.187S
EE	2	Screw, 4-40 x 1/4", pan head	ZH4-40X.250SPP
FF		Not used	
GG	5	Allen bolt, 1/4-20 x 5/8"	ZH1/420X.625CS
HH	2	Set screw, 3/8-24 x 3/8"	ZH3/8-24X.375S
II	9	Set screw, 10-32 x 3/16"	ZH10-32X.187S
JJ	6	Screw, 6-32 x 1/4", pan head	ZH6-32X.250SPP
KK	4	Bolt, 1/4-20 x 1/2"	ZH1/4-20X.500CH
LL	24	Allen bolt, 1/4-20 x 3/4"	ZH1/4-20X.750CS
MM	4	Bolt, 1/4-20 x 3/4"	ZH1/420X.750CH
NN	2	Nut, 4-40	ZH4-40NUTSH
OO		Not used	
PP	9	Nut, 10-32	ZH10-32NUTSH
QQ	2	Screw, 10-32 x 1/2", pan head	ZH10-32X.500SPP
RR	8	Screw, 10-32 x 2-1/4", pan head	ZH10-32X2.25SPS
SS	1	Tapered pin, #5 x 2"	105010017
TT	2	Dowel pin, 3/16" x 5/8"	ZHPIN3/16X5/8
UU	8	Nylon washer	ZH131X361X62N



**Figure 9.** PT1260EX and PT1260EX/PP Exploded Assembly Diagram (Mechanical Parts)

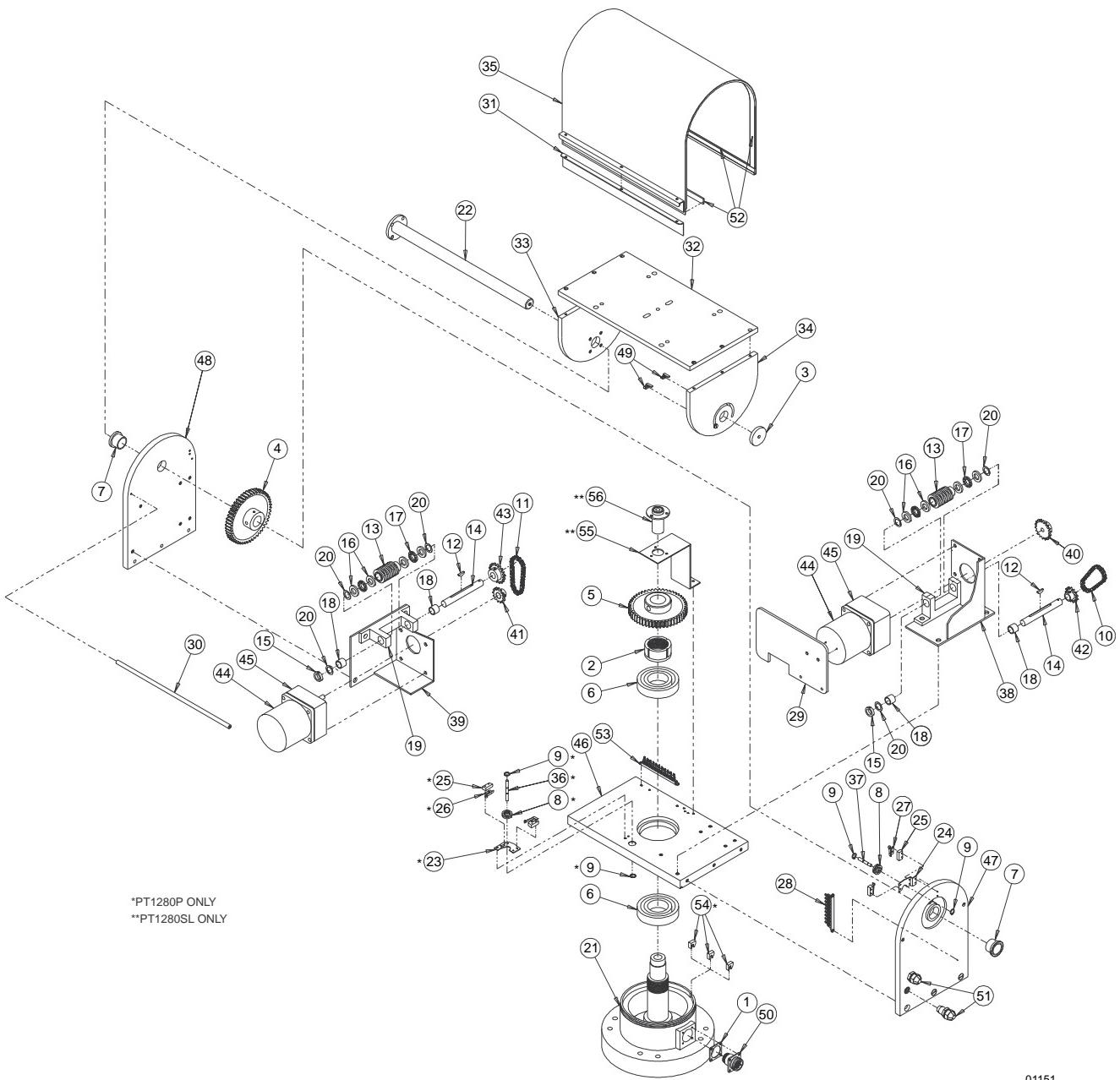
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**Table G.** PT1260EX Series Mechanical Parts List

Item	Qty	Description	Part Number
1	—	Not used	—
2	1	Nut, pan spindle	10504017COMP
3	1	Thrust cap	10504076COMP
4	1	Gear, tilt	10504084COMP
5	1	Gear, pan	10504089COMP
6	2	Bearing, pan shaft	10506012
7	—	Not used	—
8	1	Chain assembly, pan	12501010COMP
9	1	Chain assembly, tilt	12501011COMP
10	2	Key, Woodruff #3	105010015
11	2	Gear, worm	105012010
12	2	Shaft, worm gear	10504078COMP
13	2	Collar, thrust	10504085COMP
14	8	Bearing, washer only	10506005
15	4	Bearing, cage only	10506006
16	4	Bearing	10506007
17	2	Bracket, gear train	12504079COMP
18	8	Shim, arbor	ZHSHIM.004
19	1	Shaft, tilt	12501043SSCOMP
20	1	Heat sink	12504010ACOMP
21	1	Collar, tilt (non-preset models)	12504020COMP
	2	Collar, tilt (preset models)	12504020COMP
22	1	Mount, pan limit ring	12504101COMP
23	2	Gear, AZL collar (preset models only)	12504104
24	1	Tilt table	12504116COMP
25	1	Plate, motor pan	12504123COMP
26	1	Sprocket, with set screw	12504124COMP
27	1	Sprocket, with set screw	12504125COMP
28	1	Sprocket, with set screw	12504126COMP
29	1	Sprocket, with set screw	12504127COMP
30	2	Motor only: 120 VAC	12508110
		Motor only: 230 VAC	12508115
31	2	Gear head only: 120 VAC	12508111
		Gear head only: 230 VAC	12508114
32	1	Spindle base	1260EX1042COMP
33	1	Body	1250EX1141COMP
34	1	Bracket, AZL pots (preset models only)	1250EX4003WA
35	2	Ring, limit stop	1250EX4005COMP
36	1	Bracket, tilt switch	1250EX4006COMP
37	1	Bracket, pan switch	1250EX4007COMP
38	1	Bracket, heat sink	1250EX4008COMP
39	1	Side plate, tilt table, tilt side	1250EX4213COMP
40	1	Side plate, tilt table, pan side	1250EX4116COMP
41	1	Plate, motor tilt	1250EX4123TCOMP
42	2	Bushing	1250EX6000
43	4	Retainer, clip	125010001
44	—	Not Used	—
45	6	Limit stop universal	58010006
46	1	Plate, UL label (not Shown)	1260EX4000COMP
		UL Label (not shown)	ULBL02
47	—	Not used	—
48	—	Not used	—
49	2	Grommet (special)	GRO2172N
50	2	Potentiometer, 5K ohm (preset models only)	POT005.0K10534
51	2	Pin, actuator	PT18044020COMP
52	4	Switch	SWI1SM1
53	4	Actuator with insulator	SWIJS138B
54	—	Not used	—
55	1	Terminal Strip	TRS2009
56	2	Gear, AZL (preset models only)	TV12000
57	2	Cover, front/rear	1250EX4218COMP
58	1	Pipe nipple 1/2" x 4" galv.	1250EX10000
59	1	Gland, explosion proof	EHX82410084
	2	Gasket, cover (not shown)	1250EX10002

**Table H. PT1260EX Series Hardware List**

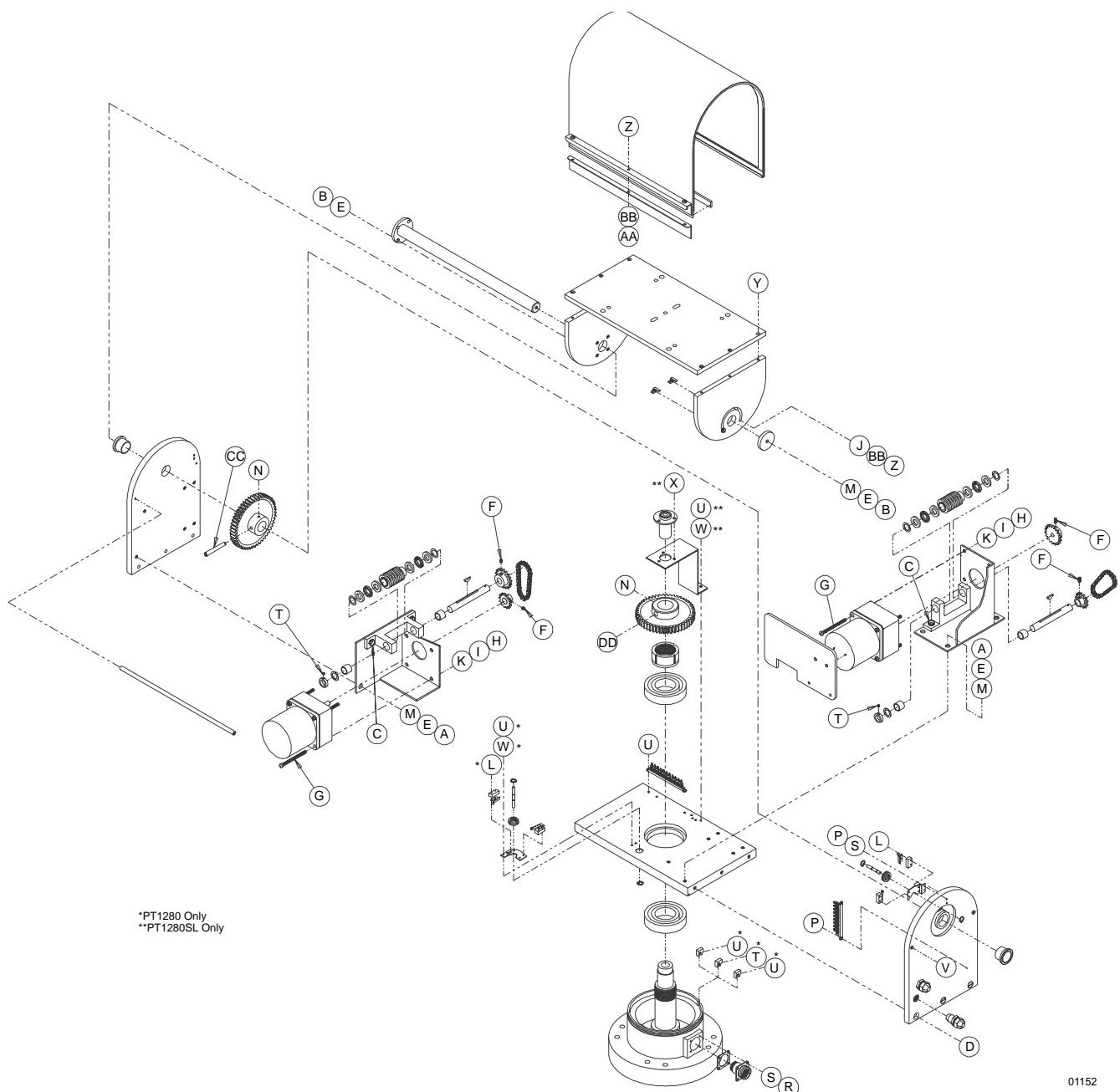
Item	Qty	Description	Part Number
A	—	Not used	—
B	6	Screw, 8-32 x 1/2" Hex socket head	ZH8-32X.500CS
C	—	Not used	—
D	—	Not used	—
E	—	Not used	—
F	6	Lockwasher #6 internal star	ZH6LWSIS
G	—	Not used	—
H	8	Flat, washer #10	ZH204X436X60C
I	—	Not used	—
J	—	Not used	—
K	12	Washer, split lock 1/4"	ZH1/4LWSSL
L	—	Not used	—
M	—	Not used	—
N	3	Screw, 6-32 x 3/8", socket head (preset models only)	ZH6-32X.375CS
O	—	Not used	—
P	9	Washer, flat 3/16" special	ZH260X562X65C
Q	1	Lockwasher, 1/4" internal star	ZH1/4LWSIS
R	—	Not used	—
S	—	Not used	—
T	3	Split lock washer, #6 (preset models only)	ZH6LWSSL
U	8	Washer, #10 split lock	ZH10LWSSL
V	—	Not used	—
W	—	Not used	—
X	8	Screw 2-56 x 7/16" pan head	ZH2-56X.437SPP
Y	4	Screw 4-40 x 3/8" pan head (non-preset models)	ZH4-40X.375SPP
	8	Screw 4-40 x 3/8" pan head (preset models)	ZH4-40X.375SPP
Z	—	Not used	—
AA	—	Not used	—
BB	4	Lockwasher #4 internal star	ZH4LWSIS
CC	5	Screw 6-32 x 3/8" pan head	ZH6-32X.375SPP
DD	3	Set screw 6-32 x 3/16" socket head knur black	ZH6-32X.187S
EE	2	Screw 4-40 x 1/4" pan head	ZH4-40X.250SPP
FF	—	Not used	—
GG	5	Bolt 1/4-20 x 5/8" hex socket head	ZH1/420X.625CS
HH	2	Set screw 3/8-24 x 3/8" hex socket knur black	ZH3/8-24X.375S
II	7	Set screw 10-32 x 3/16" hex socket knur black (non-preset models)	ZH10-32X.187S
	9	Set screw 10-32 x 3/16" hex socket knur black (preset models)	ZH10-32X.187S
JJ	6	Screw 6-32 x 1/4" pan head	ZH6-32X.250SPP
KK	4	Bolt 1/4-20 x 1/2" hex head	ZH1/4-20X.500CH
LL	24	Bolt 1/4-20 x 3/4" hex socket head	ZH1/420X.750CS
MM	4	Bolt 1/4-20 x 3/4" hex head	ZH1/420X.750CH
NN	2	Nut, Hex 4-40	ZH4-40NUTSH
OO	—	Not used	—
PP	9	Nut, Hex 10-32	ZH10-32NUTSH
QQ	2	Screw 10-32 x 1/2" pan head	ZH10-32X.500SPP
RR	8	Screw 10-32 x 2-1/4" pan head	ZH10-32X2.25SPS
SS	1	Pin, taper #5 x 2"	105010017
TT	2	Pin, dowel 3/16" x 5/8"	ZHPIN3/16X5/8
UU	8	Washer, nylon	ZH131X361X62N



**Figure 10.** PT1280P and PT1280SL Exploded Assembly (Mechanical Parts)

**Table I.** PT1280P and PT1280SL Mechanical Parts List

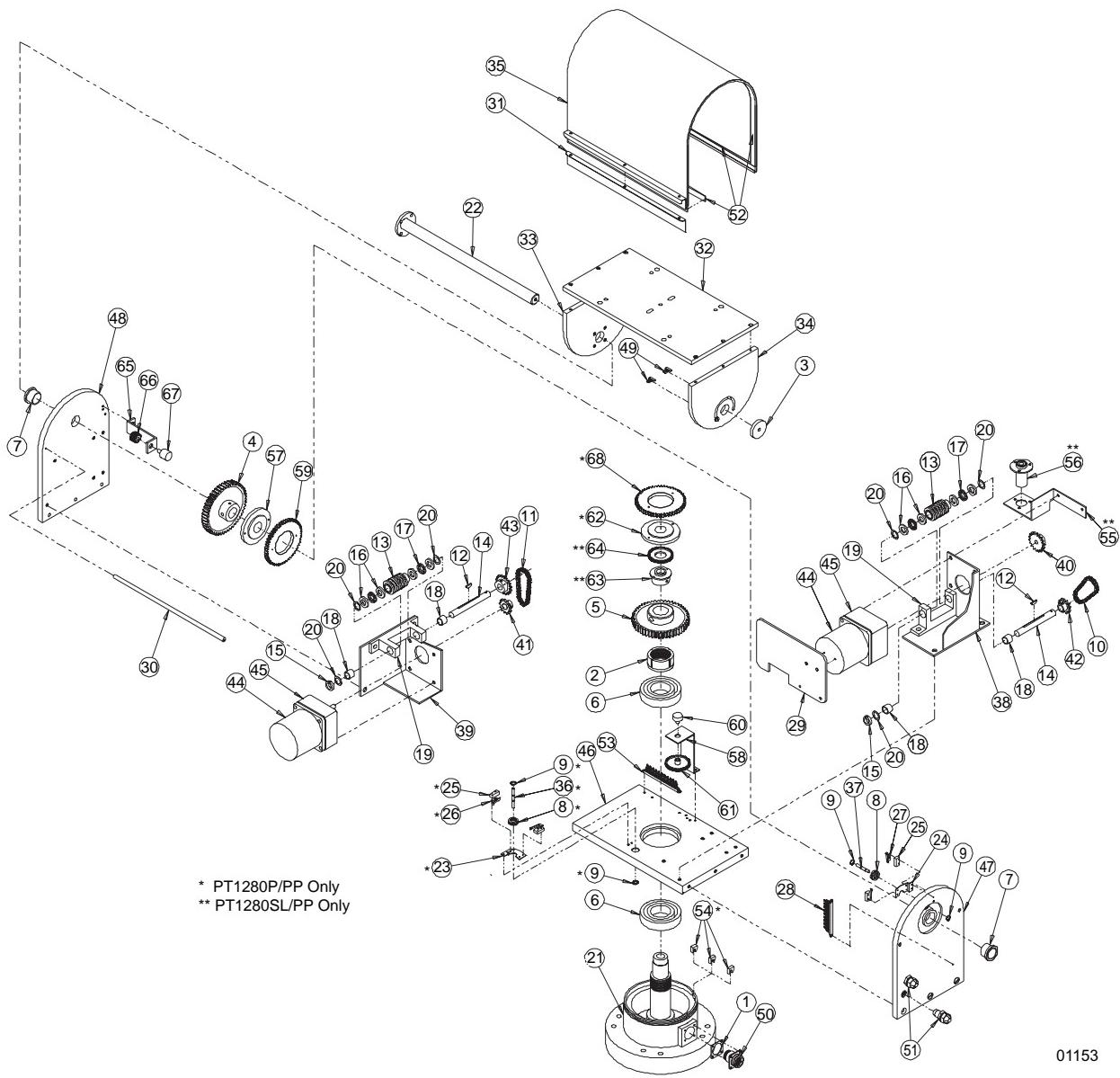
Item	Qty	Description	Part Number
1	1	Gasket, connector	105010010
2	1	Nut, pan spindle black no.8	10504017COMP
3	1	Thrust cap	10504076COMP
4	1	Gear, tilt	10504084COMP
5	1	Gear, pan	10504089COMP
6	2	Bearing 6208-ZZ	10506009
7	2	Bearing FB1416-6	10506010
8	2 (1)	Mount grommet LOR00	125010000 (SL)
9	4 (2)	Clip retainer	125010001 (SL)
10	1	Chain, assy pan	12501010COMP
11	1	Chain, assy tilt	12501011COMP
12	2	Key, Woodruff #3 alloy	105010015
13	2	Gear, worm pan	105012010
14	2	Pan shaft	10504078COMP
15	2	Thrust collar	10504085COMP
16	8	Bearing AO16, washer only	10506005
17	4	Bearing AO16C, cage only	10506006
18	4	Bearing B810-4	10506007
19	2	Bracket, gear train	12504079COMP
20	6	Shim arbor	ZHSHIM.004
21	1	Base, spindle assy	12501041ACOMP
22	1	Tilt, shaft assy	12501043COMP
23	1	Pan limit bracket	12504100COMP
24	1	Tilt limit bracket	1554052COMP
25	4 (2)	Switch	SWI1SM1 (SL)
26	2	Switch actuator w/insulation	SWIJS138B
27	2	Switch actuator, long w/insulation	SWIJS221
28	1	Terminal strip, 9 position	TRS2009
29	1	Heat sink	12504010ACOMP
30	2	Spacer rod	12504110COMP
31	1	Pull up bar	12504111COMP
32	1	Tilt table, top	12504116COMP
33	1	Table, side tilt 4H	12504117COMP
34	1	Table, side tilt 1H	12504118COMP
35	1	Cover	12504119BWA
36	1	Pin, limit pan	12504120ACOMP
37	1	Pin, limit tilt	12504121ACOMP
38	1	Plate, motor pan	12504123COMP
39	1	Plate, motor tilt	12504123TCOMP
40	1	Sprocket 25B18-5/16" W/SS	12504124COMP
41	1	Sprocket, motor tilt	12504125COMP
42	1	Sprocket, 25B13 1/2" bore w/set screw	12504126COMP
43	1	Sprocket, 25B18 1/2" bore w/set screw	12504127COMP
44	2	Motor 115V	12508110
45	2	Gear head	12508111
46	1	Bottom plate	12504112ACOMP
47	1	Tilt, side plate	12504115COMP
48	1	Pan, side plate	12804114COMP
49	2	Tilt, limit stop	1554050COMP
50	1	Conn CPC 16 pos pin recp	CON206036-1
51	2	UL, gland, SL-9	EH400010003
52	7 FT	Gasket poron 1/8 x 1/2, black	EH550010030
53	1	Term strip, 11 pin	TRS2011
54	3	Limit, stop pan	58010006 (P ONLY)
55	1	Bracket, slip ring	12804002COMP (SL ONLY)
56	1	Ring, slip #AC4023-18A	28010000 (SL ONLY)



**Figure 11.** PT1280P and PT1280SL Exploded Assembly (Hardware)

**Table J.** PT1280P and PT1280SL Hardware List

Item	Qty	Description	Part Number
A	4	Screw, 1/4-20 x .500 soc	ZH1/420X.500CS
B	5	Bolt, 1/4-20 x 5/8" sock SS	ZH1/420X.625CS
C	4	Bolt 1/4-20 x 3/4" hex SS	ZH1/420X.750CH
D	6	Screw 1/4-20 x 1" flat phil SS	ZH1/420X1.00SFS
E	9	Washer, split lock 1/4" SS	ZH1/4LWSSL
F	4	Set screw 10-32 x 3/16" soc knur blk	ZH10-32X.187S
G	8	Screw 10-32 x 2 1/4" phil pan SS	ZH10-32X2.25SPS
H	8	Nut, hex 10-32 SS	ZH10-32NUTSH
I	8	Washer, split lock #10 SS	ZH10LWSSL
J	2	Washer, flat #8 SS	ZH188X435X60C
K	8	Washer, flat #10	ZH204X436X60C
L	8 (4)	Screw 2-56 x 7/16" pan phil SS	ZH2-56X.437SPP (SL ONLY)
M	5	Washer, flat 3/16" SS	ZH260X562X65C
N	2	Set screw 3/8-24 x 3/8" soc knur blk	ZH3/8-24X.375S
P	4	Screw 4-40 x 1/4" pan phil SS	ZH4-40X.250SPP
R	4	Screw 4-40 x 3/8" pan phil SS	ZH4-40X.375SPP
S	6	Washer lock #4 internal tooth SS	ZH4LWSIS
T	3	Set screw 6-32 x 3/16" soc knur blk	ZH6-32X.187S
U	6 (4)	Screw 6-32 x 3/8" pan phil SS	ZH6-32X.375SPP (SL ONLY)
V	4	Screw 6-32 x 3/4" flat phil SS	ZH6-32X.750SFS
W	2 (2)	Washer, split lock #6	ZH6LWSIS (SL ONLY)
X	3	Screw 8-32 x 3/8" pan phil SS	ZH8-32X.375SPP
Y	6	Screw 8-32 x 1/2" soc SS	ZH8-32X.500CS
Z	5	Screw 8-32 x 5/8" pan phil SS	ZH8-32X.625SPP
AA	3	Nut, hex 8-32 SS	ZH8-32NUTSH
BB	5	Washer, internal star #8 SS	ZH8LWSIS
CC	1	Taper pin #5 x 2 1/2"	ZHPIN#5X21/2
DD	1	Pin, dowel 3/16" x 5/8"	ZHPIN3/16X5/8

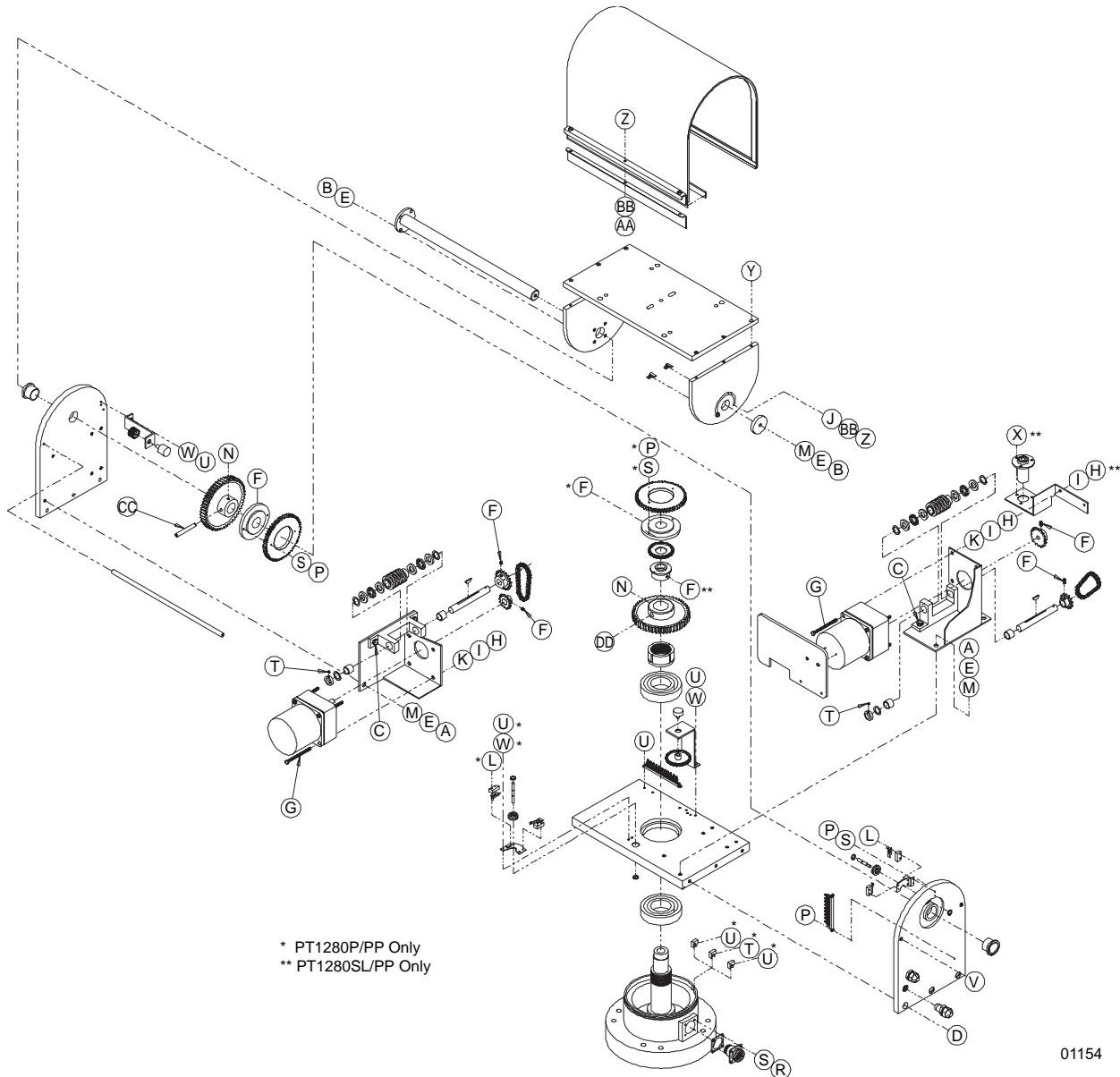


**Table K. PT1280P/PP and PT1280SL/PP Mechanical Parts List**

Item	Qty	Description	Part Number
1	1	Gasket, connector	105010010
2	1	Nut, pan spindle, black no.8	10504017COMP
3	1	Thrust cap	10504076COMP
4	1	Gear, tilt	10504084COMP
5	1	Gear, pan	10504089COMP
6	2	Bearing 6208-ZZ	10506009
7	2	Bearing FB1416-6	10506010
8	2 (1)	Mount grommet Loroo	125010000 (SL/PP)
9	4 (2)	Clip retainer	125010001 (SL/PP)
10	1	Chain assy, pan	12501010COMP
11	1	Chain assy, tilt	12501011COMP
12	2	Key, Woodruff #3 alloy	105010015
13	2	Gear, worm pan	105012010
14	2	pan shaft	10504078COMP
15	2	Thrust collar	10504085COMP
16	8	Bearing, AO16, washer only	10506005
17	4	Bearing, A016C, cage only	10506006
18	4	Bearing B810-4	10506007
19	2	Bracket, gear train	12504079COMP
20	6	Shim arbor	ZHSHIM.004
21	1	Base spindle assy	12501041ACOMP
22	1	Tilt shaft assy	12501043COMP
23	1	Pan limit bracket	12504100COMP
24	1	Tilt limit bracket	1554052COMP
25	4 (2)	Switch	SWI1SM1 (SL/PP)
26	2 (0)	Switch actuator, long w/insulation	SWIJS221 (SL/PP)
27	2	Switch actuator w/insulation	SWIJS138B
28	1	Terminal strip, 9 pin	TRS2009
29	1	Heat sink	12504010ACOMP
30	2	Spacer rod	12504110COMP
31	1	Pull up bar	12504111COMP
32	1	Tilt table top	12504116COMP
33	1	Table, side tilt 4H	12504117COMP
34	1	Table, side tilt 1H	12504118COMP
35	1	Cover	12504119BWA
36	1 (0)	Pin, limit pan	12504120ACOMP (SL/PP)
37	1	Pin, limit tilt	12504121ACOMP
38	1	Plate, motor pan	12504123COMP
39	1	Plate, motor tilt	12504123TCOMP
40	1	Sprocket 25B18-5/16" W/SS	12504124COMP
41	1	Sprocket, motor tilt	12504125COMP
42	1	Sprocket, 25B13, 1/2" bore w/set screw	12504126COMP
43	1	Sprocket, 25B18, 1/2" bore w/set screw	12504127COMP
44	2	Motor, 115V	12508110
45	2	Gear head	12508111
46	1	Bottom plate	12504112ACOMP
47	1	Tilt side plate	12504115COMP
48	1	Pan side plate	12804114COMP
49	2	Bottom plate	1554055COMP
50	1	Conn 28 pos pin recip	CON205840-3 (SL/PP, P/PP)
51	2	UL, gland, SL-9	EH400010003
52	7 FT	Gasket, Poron 1/8 x 1/2, blk	EH550010030
53	1	Term strip, 11 pin	TRS2011
54	3	Limit stop, pan	58010006 (P/PP only)
55	1	Bracket, slip ring	12804003COMP (SL/PP only)
56	1	Slip ring, 24 circuit	250010000
57	1	Collar, tilt AZL gear	12504020COMP
58	1	Bracket, AZL pot	12504003COMP (P/PP only)
59	1	Bracket, pot (pan)	12804004COMP (SL/PP only)
		Gear, AZL collar, polycarb	12504104

**Table K.** PT1280P/PP and PT1280SL/PP Mechanical Parts List (Continued)

Item	Qty	Description	Part Number
60	1	Pot model 534 5K OHM	POT005.0K10534 (P/PP only)
61	1	Pot, dual arm pre res	POTDARM01.0K (SL/PP only)
		Gear potentiometer	TV12000 (P/PP only)
		Gear 1.875 plastic	PT250010002 (SL/PP only)
62	1	Collar, pan AZL gear	12504001COMP
63	1	Hub, PP pan gear	12804005COMP
64	1	Gear, pan spindle feedback SL	PT25004122COMP
65	1	Gear, polycarb	TV12000
66	1	Bracket, AZL potentiometer	12504003COMP
67	1	Pot, model 534 5K OHM	POT005.0K10534
68	1	Gear, AZL collar, polycarb	12504104



**Figure 13.** PT1280P/PP and PT1280SL/PP Exploded Assembly (Hardware)

**Table L.** PT1280P/PP and PT1280SL/PP Hardware List

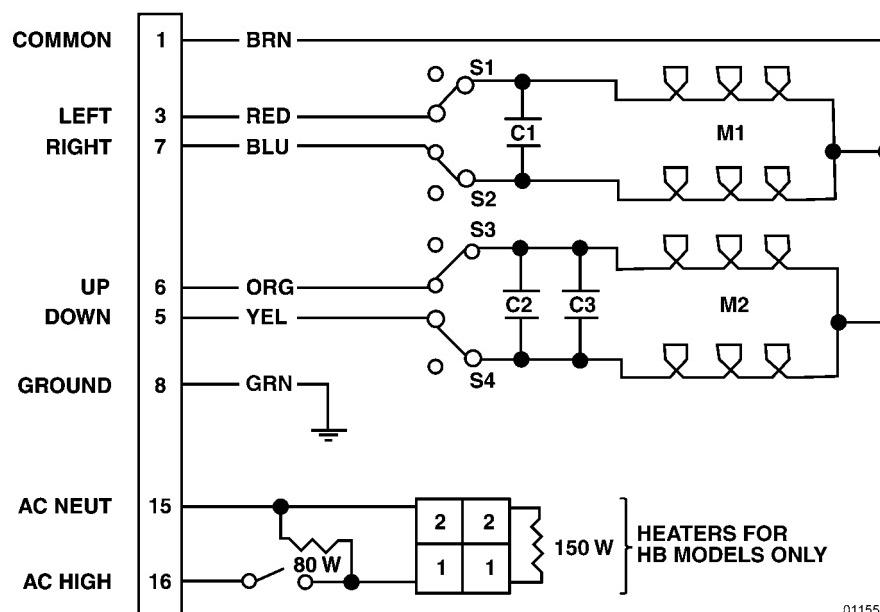
Item	Qty	Description	Part Number
A	4	Screw 1/4-20 x .500 soc	ZH1/420X.500CS
B	5	Bolt 1/4-20 x 5/8" soc SS	ZH1/420X.625CS
C	4	Bolt 1/4-20 x 3/4" hex SS	ZH1/420X.750CH
D	6	Screw 1/4-20 x 1" flat phil SS	ZH1/420X1.00SFS
E	9	Washer split lock 1/4" SS	ZH1/4LWSSL
F	6	Set screw 10-32 x 3/16" soc knur blk	ZH10-32X.187S
G	8	Screw 10-32 x 2 1/4" phil pan SS	ZH10-32X2.25SPS
H	8 (10)	Nut hex 10-32 SS	ZH10-32NUTSH (SL/PP)
I	8 (10)	Washer split lock #10 SS	ZH10LWSSL (SL/PP)
J	2	Washer, flat #8 SS	ZH188X435X60C
K	8	Washer, flat #10	ZH204X436X60C
L	8 (4)	Screw 2-56 x 7/16" pan phil	ZH2-56X.437SPP (SL/PP)
M	5	Washer flat 3/16" SS	ZH260X562X65C
N	2	Set screw 3/8-24 x 3/8" soc knur black	ZH3/8-24X.375S
P	8	Screw 4-40 x 1/4" pan phil SS	ZH4-40X.250SPP
R	4	Screw 4-40 x 3/8" pan phil SS	ZH4-40X.375SPP
S	10	Washer lock #4, internal tooth SS	ZH4LWSIS
T	3	Set screw 6-32 x 3/16" soc knur black	ZH6-32X.187S
U	10 (6)	Screw 6-32 x 3/8" pan phil SS	ZH6-32X.375SPP (SL/PP)
V	4	Screw 6-32 x 3/4" flat phil SS	ZH6-32X.750SFS
W	6 (2)	Washer split lock #6	ZH6LWSIS
X	3	Screw 8-32 x 3/8" pan phil SS	ZH8-32X.375SPP
Y	6	Screw 8-32 x 1/2" soc SS	ZH8-32X.500CS
Z	5	Screw 8-32 x 5/8" pan phil SS	ZH8-32X.625SPP
AA	3	Nut hex 8-32 SS	ZH8-32NUTSH
BB	5	Washer internal star #8 SS	ZH8LWSIS
CC	1	Taper pin #5 x 2 1/2"	ZHPIN#5X21/2
DD	2	Pin dowel 3/16" x 5/8"	ZHPIN3/16X5/8

## WIRING DIAGRAMS

**Table M.** PT1250 Series Electrical Parts List

	Parts are for all models unless specified otherwise	
Symbol	Description	Part Number
C1, C2	Capacitor, 6 MFD, 250 VAC (except 220 model)	CAPU0006.0/250N
C3	Capacitor, 1.5 MFD, 400 V (220 model only)	12508016
	Capacitor, 1 MFD, 600 V (except 220 model)	CAPU0001.0/600
M1, M2	Not used (220 model only)	
M1, M2	Pan and tilt motors (except 220 model)	12508110
—	Pan and tilt motors (220 model only)	12508115
—	Motor gearbox (except 220 model)	12508111
—	Motor gearbox (220 model only)	12508114
R1, R2	Potentiometer, 5K ohm (PP, WT models only)	POT005.0K10534
S1-S4	Switch	SWI1SM1
S1-S4	Pan switch actuator	SWIJS221
S1-S4	Tilt switch actuator	SWIJS138B
—	Cover heater blanket, 80 watts (HB model only)	10501000
—	Base heater blanket, 75 watts each (HB model only)	EH110065A
—	Thermostat (HB model only)	EH5510049A
—	7-pin female mating connector assy (RAD model only)	MS3106E16S1S
—	9-pin female connector assy (P, 220, FG, FGP models only)	1751000COMP
—	16-pin female connector assy (PP, WT, HB models only)	CONA16S

### P1 CONNECTOR



01155

**Figure 14.** PT1250 Series Wiring for P, FG, FGP, HB and 220 Models

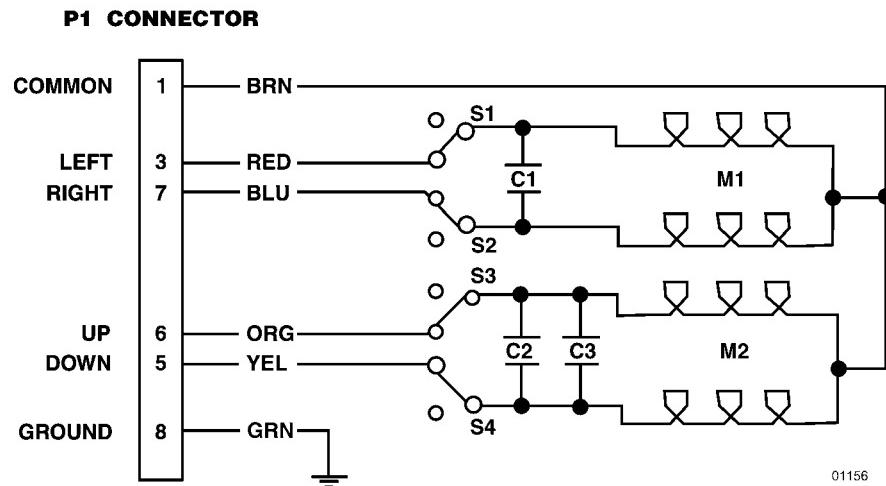


Figure 15. PT1250 Series Wiring for RAD Model

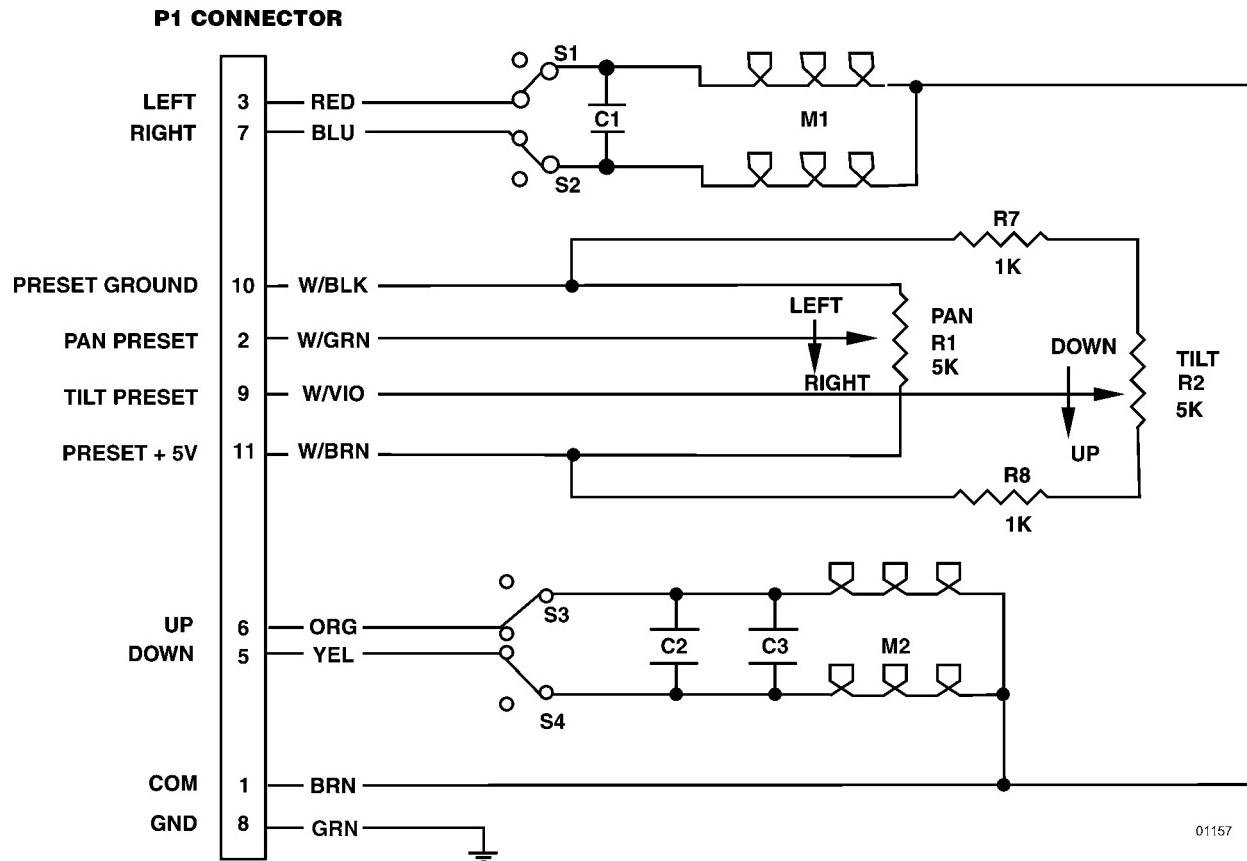
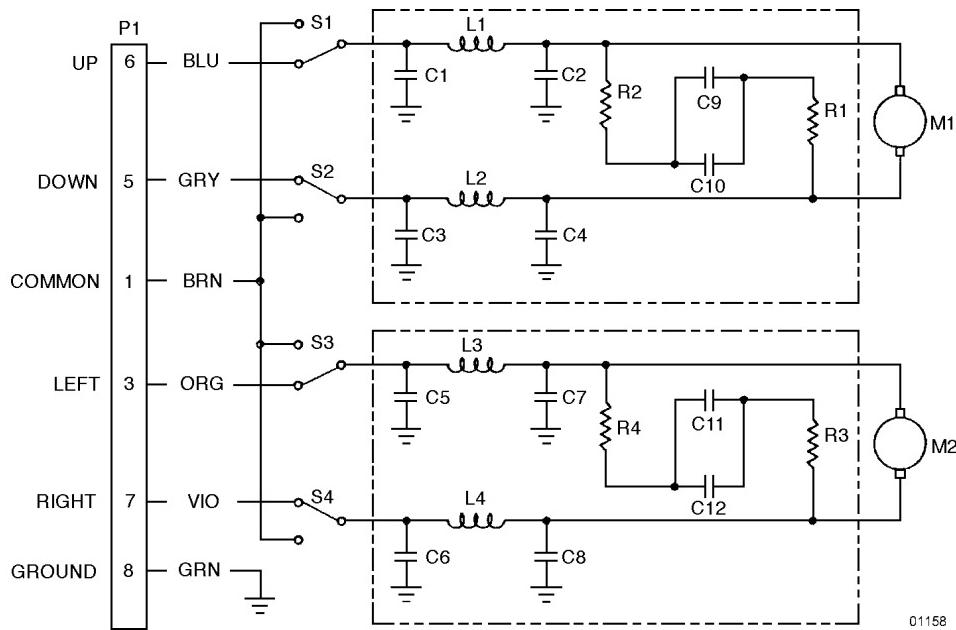


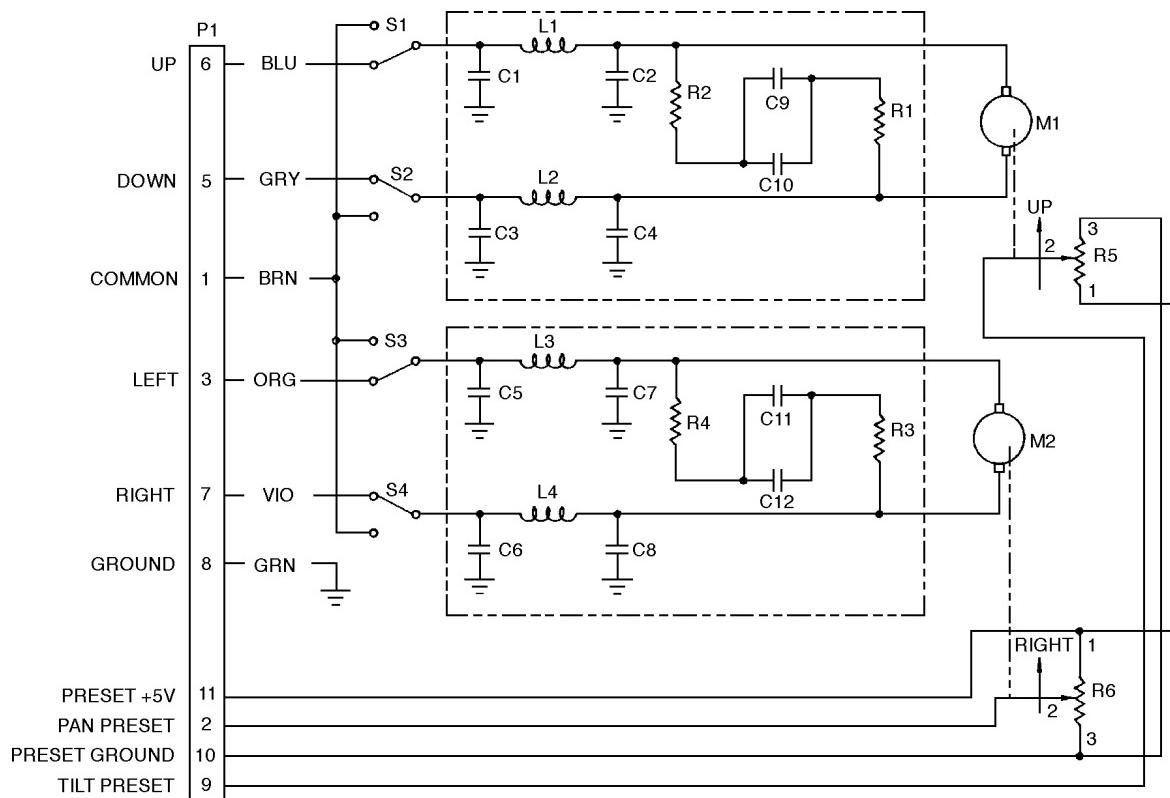
Figure 16. PT1250 Series Wiring for PP and WT Models



**Figure 17.** PT1250DC Wiring Diagram

**Table N.** PT1250DC Electrical Parts List

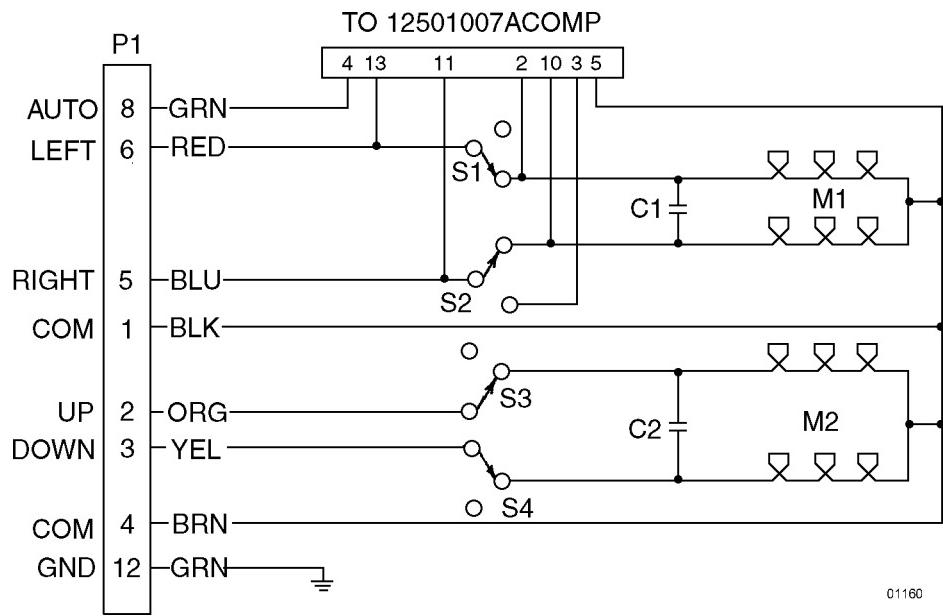
Quantity	Symbol	Description	Manufacturer	Part Number
8	C1-8	Capacitor .0047/1kv	CDE	CAPU0.0047/1000
4	C9-12	Capacitor .1/400V	Sprague	CAPU0000.1/400
4	L1-4	Choke 100mh	Miller	CHO5250
2	M1-2	Motor	Pelco	MR02-0002-3104
1	P1	Connector	AMP	CON206705-1
9	—	Connector Pin	AMP	CON66103-2
4	R1-4	Resistor 47ohm 1/4W	—	RES047.0-.25
2	—	P.C. Assembly	Pelco	1551016COMP
1	—	Mating Connector Assy.	AMP	1751000COMP
4	S1-S4	Switch	—	SWI1SM1



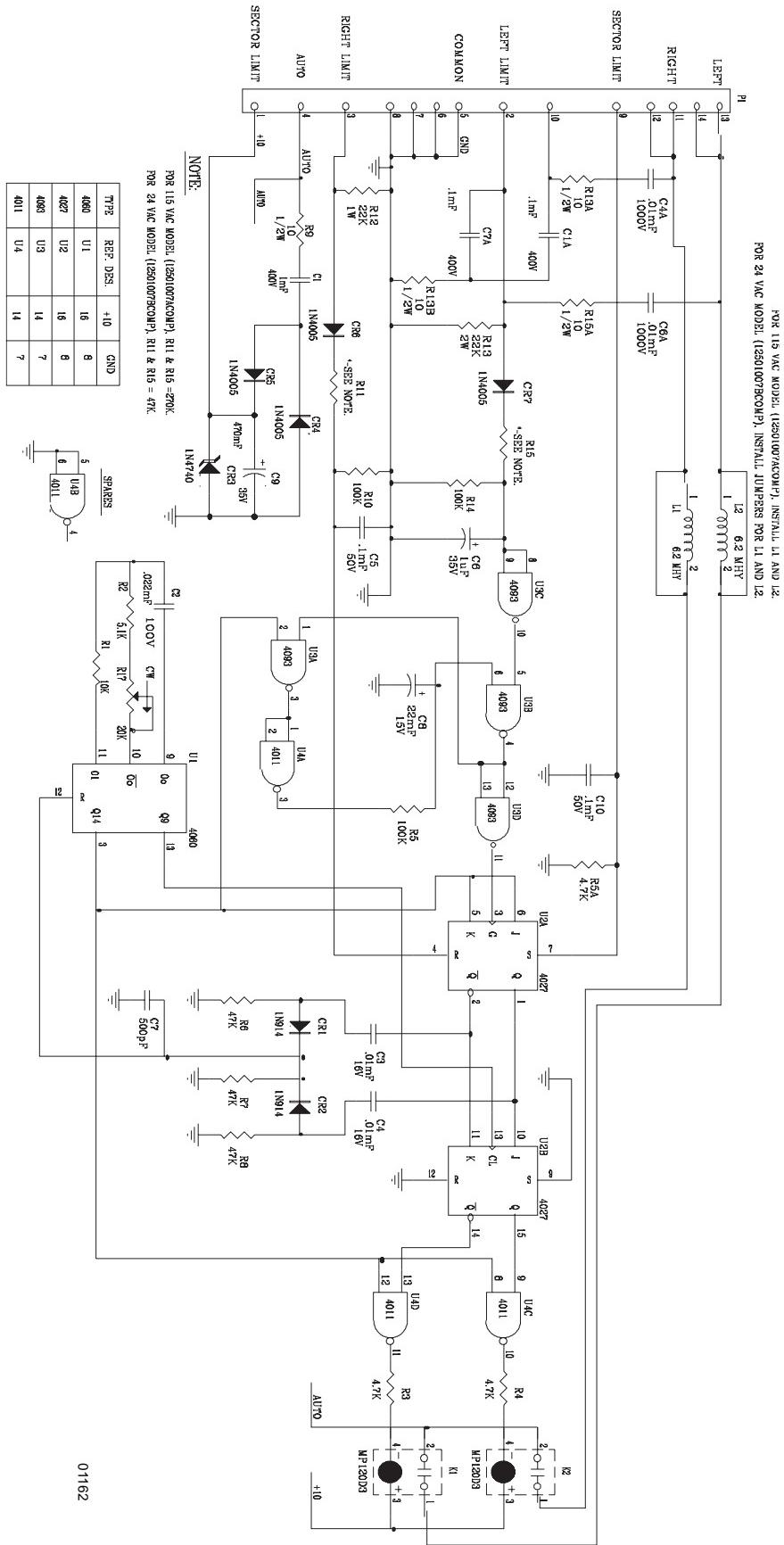
**Figure 18.** PT1250DC/PP Wiring Diagram

**Table O.** PT1250DC/PP Electrical Parts List

Quantity	Symbol	Description	Part Number
8	C1-8	Capacitor .0047/1kv	CAPU0.0047/1000
4	C9-12	Capacitor .1/400V	CAPU0000.1/400
4	L1-4	Choke 100mh	CHO5250
2	M1-2	Motor	MR02-0002-3104
1	P1	Connector	CON206036-1
4	R1-4	Resistor 47 ohm 1/4W	RES047.0-.25
2	R5-6	Pot 5K Ten Turn	POT005.0K10534
2	—	P.C. Assembly	1551016COMP
1	—	Mating Connector Assy.	CONA16S
4	S1-S4	Switch	SWI1SM1
16	—	Connector Pin	CON66103-2



**Figure 19.** PT1253R Schematic Diagram



**Figure 20.** 12501007ACOMP Frame Scan Schematic

**Table P.** 12501007ACOMP Frame Scan Parts List

Schematic	Quantity	Component Description	Part Number
C7	1	CAP 500PF 600V radial	CAPP0500.0/500
C2	1	CAP .022MF 100V AZ	CAPU00.022/100
C4A, C6A	2	CAP .01M 1000V radial disc	CAPU000.01/1000
C3, C4	2	CAP .01MF 16V radial	CAPU000.01/16
C1A, C7A	2	CAP .1M 400V axial	CAPU0000.1/400
C5, C10	2	CAP .1M 50V rad	CAPU0000.1/50
C6	1	CAP 1M 35V TNTDP	CAPU0001.0/35TD
C1	1	CAP 1MF AX	CAPU0001.0/400
C8	1	NP CAP 22M 15VAX	CAPU0022.0/15T
C9	1	CAP 470M 35V RAD	CAPU470.0/35
M4610	2	Choke, 6.2 microhenrys	CHO4610
Input Connector	1	CONN MTA HDR LK 14-pos PC MT	CON1-640388-4
CR4, CR5, CR6, CR7	4	NP diode 600V 1A 1N4005	DIO4005
CR3	1	Diode 10V 1W ZENNER 1N470A	DIO4740
CR1, CR2	2	NP diode 1A UNITRODE 1N914	DIO914
4011	1	IC MC14011BCP	ICO4011
4027	1	IC CD4027BCN	ICO4027
4060	1	IC binary CT DIV OS HCF4060BE	IOC4060
4093	1	IC GN NAND SCHMTRIG CD4093BE	IOC4093
R17	1	POT 20K OHM	POT20.0K0191BR
K1, K2	2	Relay 120 VAC SPST MP120D4	REL120A01MP
R5A, 10R4, 11R3	3	NP RES 4.7K OHM 1/4W	RES004.7K.25
R9, R13A, R13B, R15A	4	NP RES 10 OHM 1/2W	RES010.0-.5
R1	1	NP RES 10K OHM 1/4W	RES010.0K.25
R2	1	NP RES 5.1K OHM 1/4W	RES005.1K.25
R12	1	Resistor 22K OHM 1W	RES022.0K1
R13	1	Resistor 22K OHM 2W	RES022.0K2
R6, R7, R8	3	NP RES 47K OHM 1/4W	RES047.0K.25
R5, R10, R14	3	NP RES 100K OHM 1/4W	RES100.0K.25
R11, R15	2	Resistor 270K OHM 1/4W	RES270.0K.25

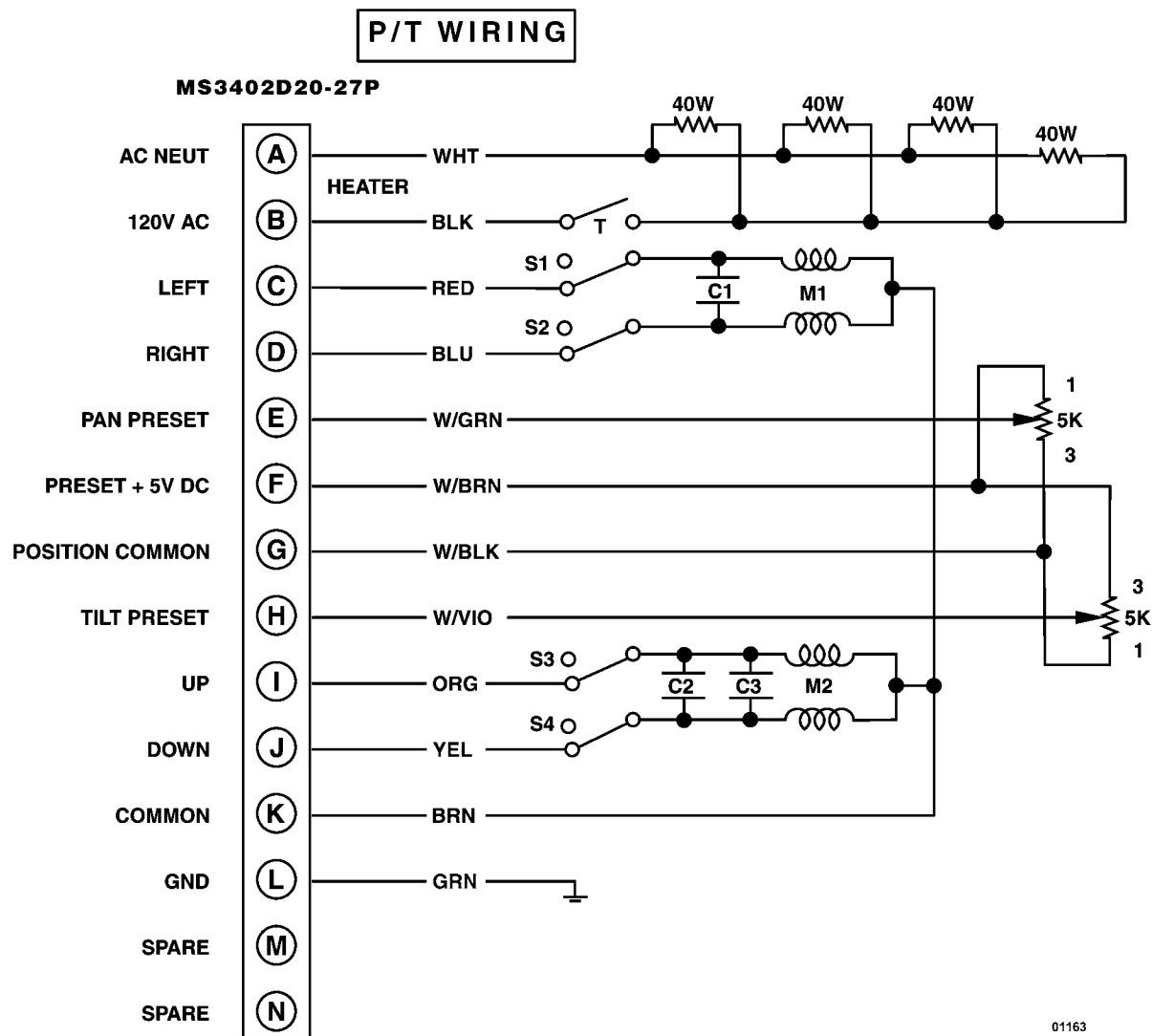
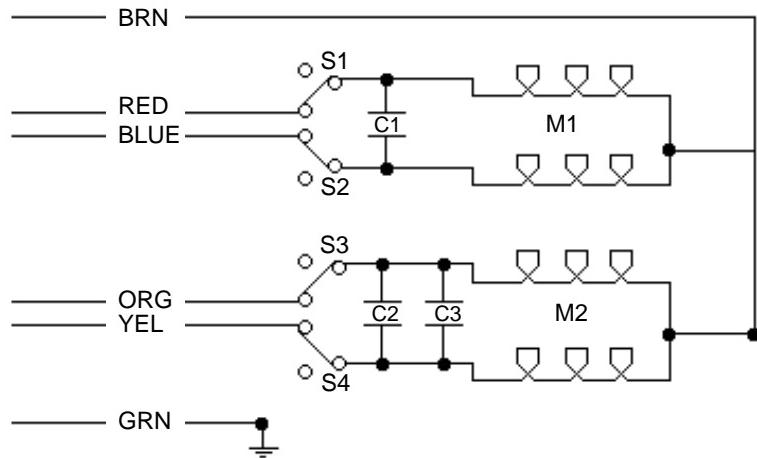


Figure 21. PT1250EX/AMS Wiring Diagram

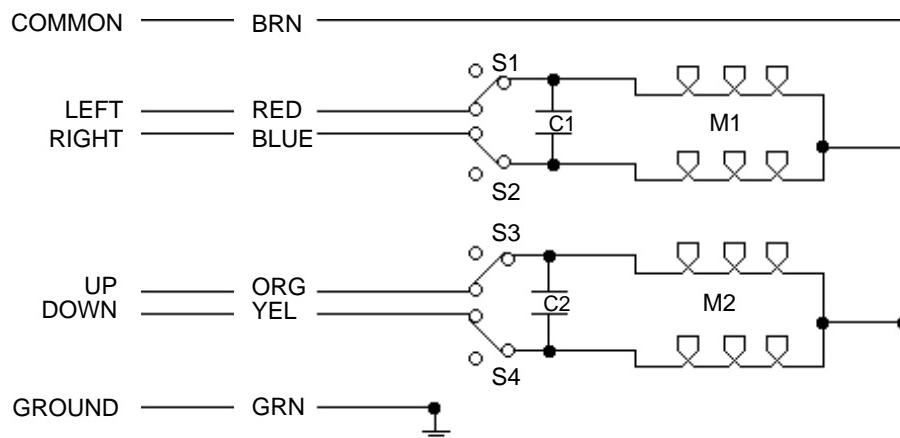
Table Q. PT1250EX/AMS Electrical Parts List

Symbol	Description	Part Number
C1, C2 C3 M1, M2 — —	Capacitor, 6 MFD, 250 VAC Capacitor, 1 MFD, 600 V Pan and tilt motors Motor gearhead	CAPU0006.0/250N CAPU0001.0/600 12508110 12508111
S1-S4 S1-S4 — T —	Switch Switch actuator Heater blanket, 40 watts each Thermostat Mating connector assembly	POT005.0K10534 SWI1SM1 SWIJS138B EHWD10087 EH5510049A CONMS3406D20-27



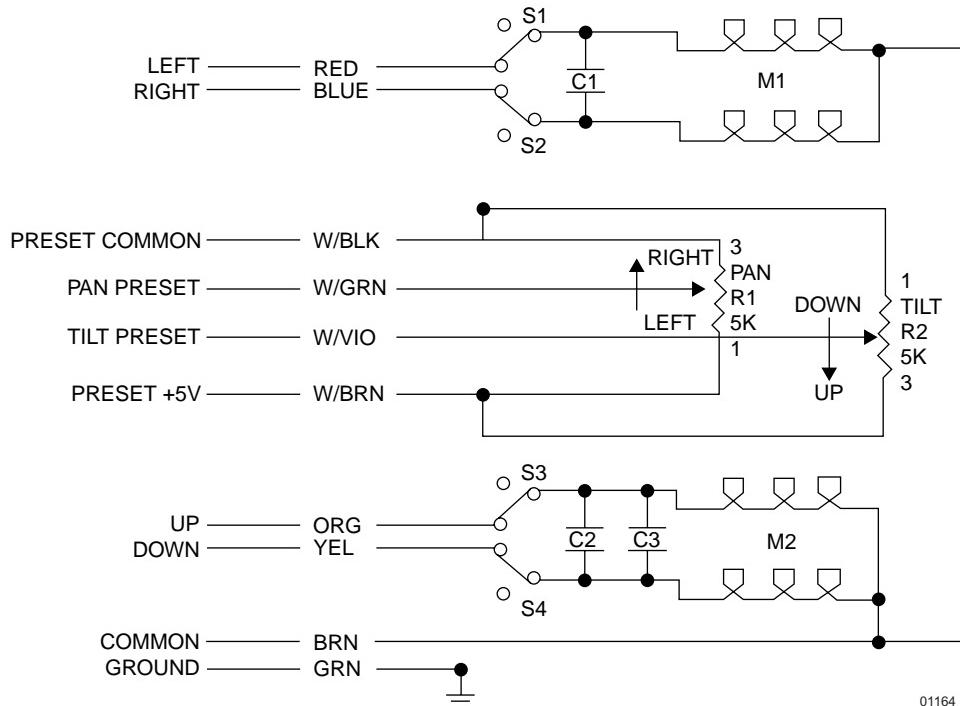
Quantity	Symbol	Description	Part Number
1	C1, C2	Capacitor, 6 MFD 250 VAC	CAPU0006.0/250N
1	C3	Capacitor, 1 MF 600V	CAPU0001.0/600
1	M1	Pan Motor	12508110
1	M2	Tilt Motor	12508110
2	—	Motor Gearhead	12508111
4	S1-S4	Switch	SWI1SM1

Figure 22. PT1260EX Wiring Schematic



Quantity	Symbol	Description	Part Number
1	C1, C2	Capacitor, 1.5 MF 400V	12508116
1	M1	Pan Motor	12508115
1	M2	Tilt Motor	12508115
2	—	Motor Gearhead	12508114
4	S1-S4	Switch	SWI1SM1

Figure 23. PT1260EX/220 Wiring Diagram



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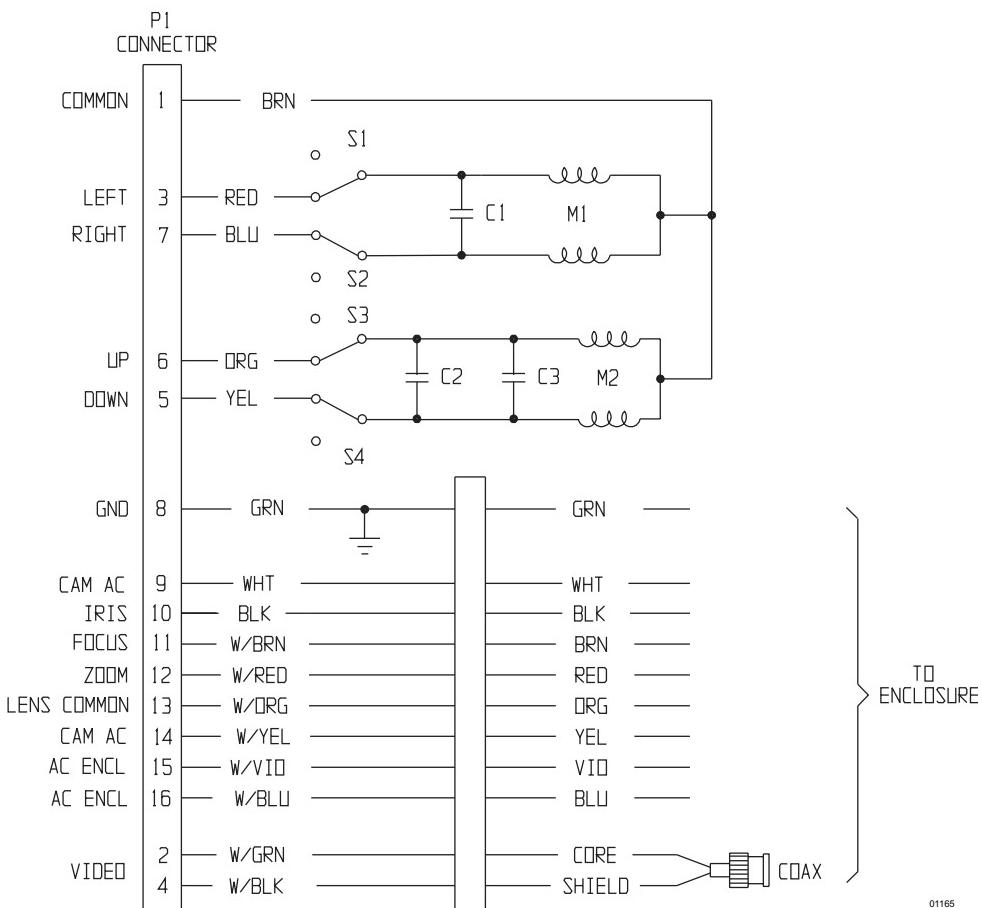
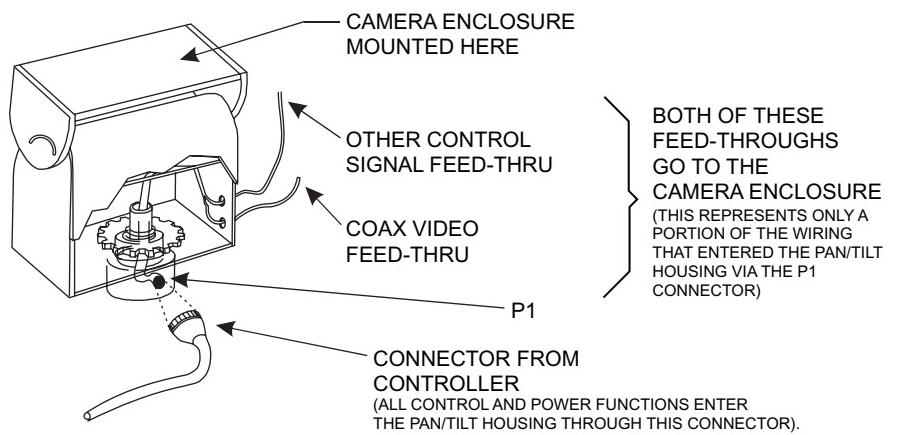
**PT1260EX/PP**

Quantity	Symbol	Description	Part Number
2	C1, C2	Capacitor, 6 MF 250V	CAPU0006.0/250N
1	C3	Capacitor, 1 MF 600V	CAPU0001.0/600
4	S1-S4	Switch	SWI1SM1
1	M1	Pan Motor	12508110
1	M2	Tilt Motor	12508110
2	—	Gear Head	12508111
2	R1, R2	Pot	POT005.0K10534

**PT1260EX/PP/230**

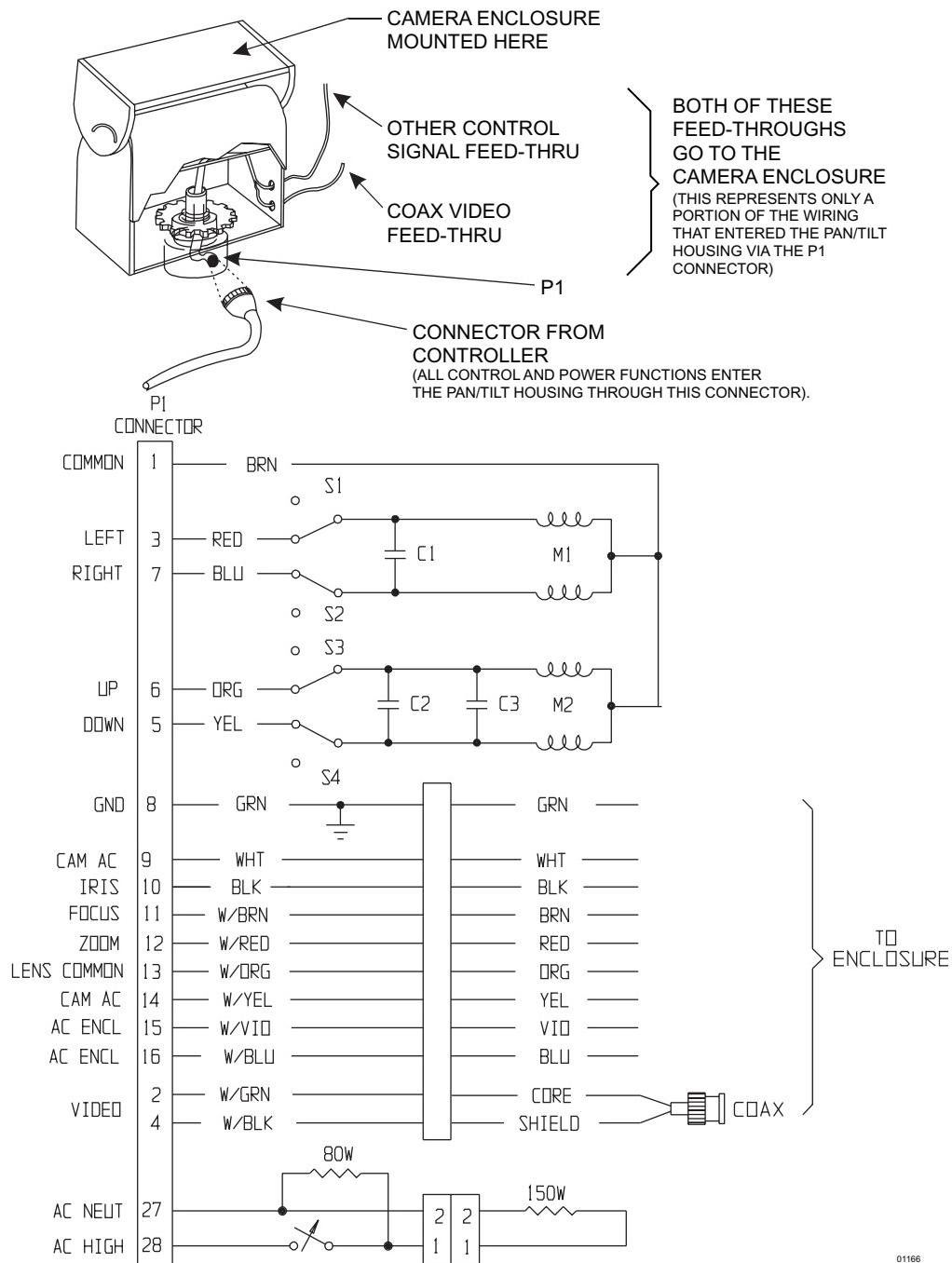
Quantity	Symbol	Description	Part Number
1	C1, C2	Capacitor, 1.5 MF 400V	12508016
—	C3	Not Used	—
1	M1	Pan Motor	12508115
1	M2	Tilt Motor	12508115
2	—	Motor Gearhead	12508114
4	S1-S4	Switch	SWI1SM1

**Figure 24.** PT1260EX/PP and PT1260EX/PP/230 Wiring Schematic



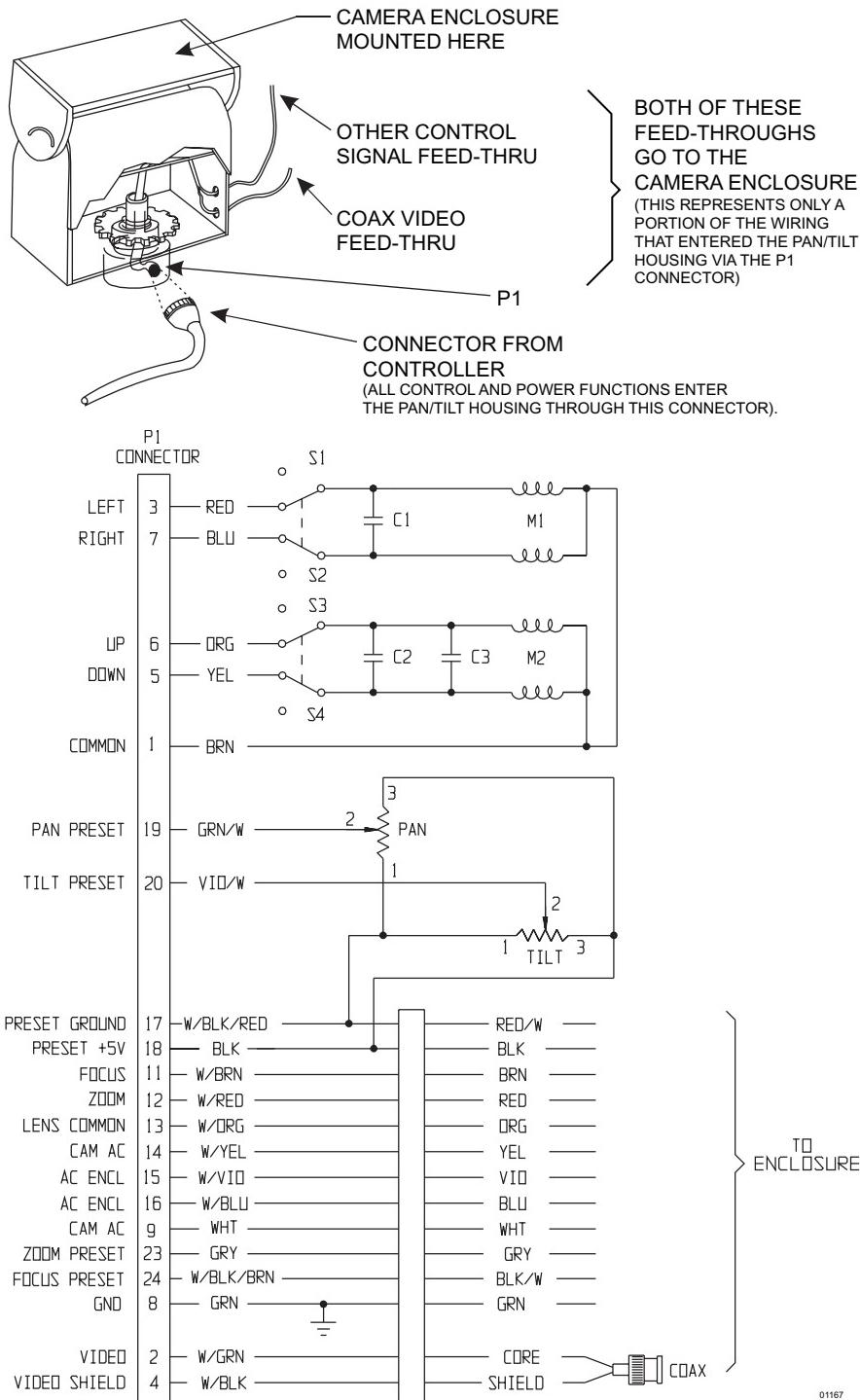
Qty	Sym	Description	Mfr	Part Number
1	C1,C2	Capacitor 6MFD, 250VAC	—	CAPU0006.0/250N
1	C3	Capacitor, 1MF 600VAC	CDE	CAPU0001.0/600
1	M1	Pan Motor	Pelco	12508110
1	M2	Tilt Motor	Pelco	12508110
1	P1	Connector	AMP	CON206036-1
4	S1-S4	Switch	Microswitch	SWI1SM1
16	—	Connector Pins	AMP	CON66103-2

Figure 25. PT1280P/PT128SL Wiring Diagram



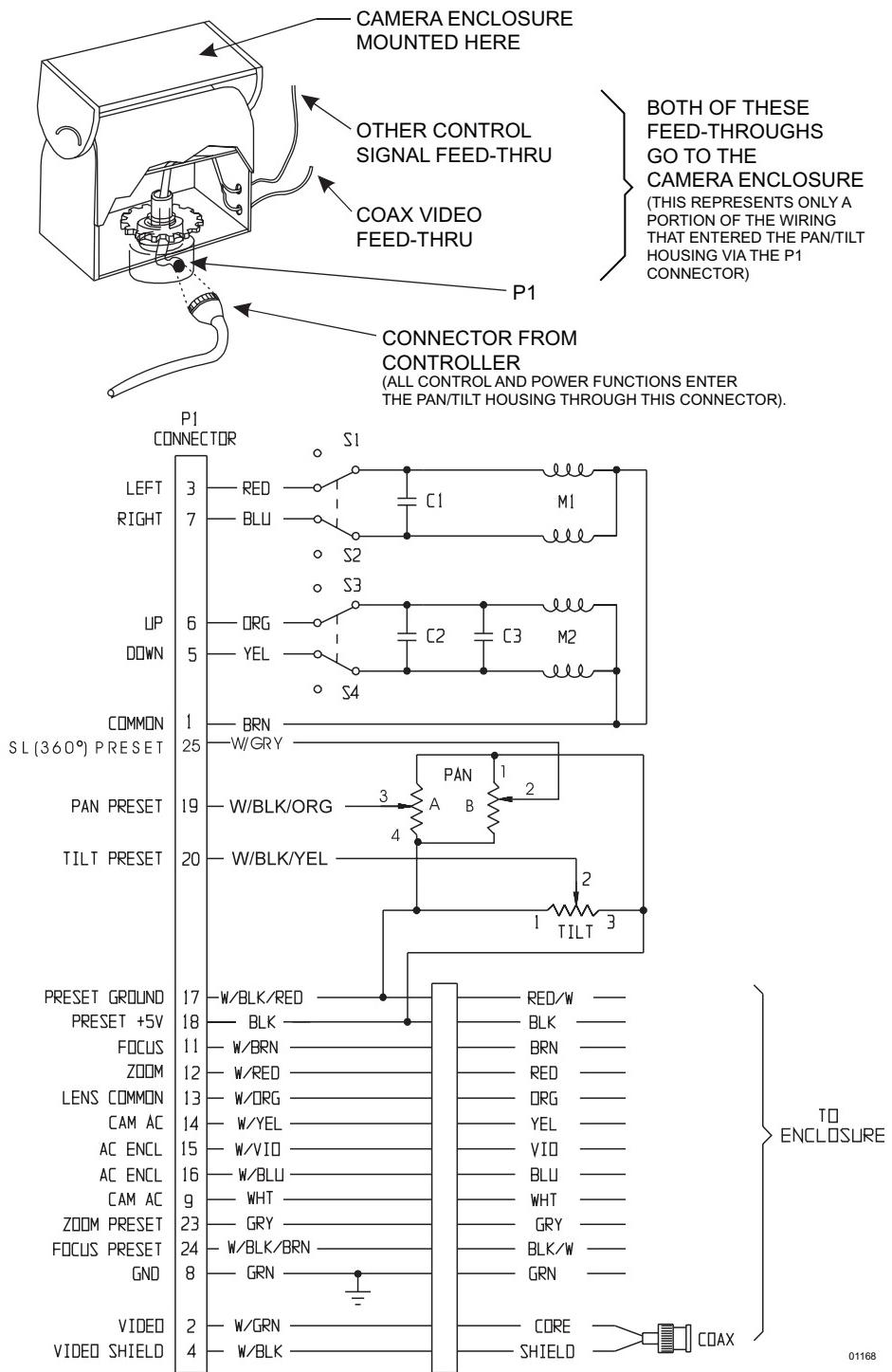
Qty	Sym	Description	Mfr	Part Number
1	C1,C2	Capacitor 6MFD 250VAC	—	CAPU0006.0/250N
1	C3	Capacitor 1MF 600VAC	CDE	CAPU0001.0/600
1	M1	Pan Motor	Pelco	12508110
1	M2	Tilt Motor	Pelco	12508110
1	P1	Connector	AMP	CON206036-1
4	S1-S4	Switch	Microswitch	SWI1SM1
28	—	Connector Pins	AMP	CON205840-3

Figure 26. PT1280P/HB Wiring Diagram



Qty	Sym	Description	Mfr	Part Number
1	C1, C2	Capacitor 6MFD 250VAC	—	CAPU0006.0/250N
1	C3	Capacitor 1MF 600VAC	CDE	CAPU0001.0/600
1	M1	Pan Motor	Pelco	12508110
1	M2	Tilt Motor	Pelco	12508110
1	P1	Connector	AMP	CON206036-1
4	1-S4	Switch	Microswitch	SWI1SM1
28	—	Connector Pins	AMP	CON205840-3

Figure 27. PT1280P/PP Wiring Diagram



Qty	Sym	Description	Mfr	Part Number
1	C1, C2	Capacitor 6MFD 250VAC	—	CAPU0006.0/250N
1	C3	Capacitor 1MF 600VAC	CDE	CAPU0001.0/600
1	M1	Pan Motor	Pelco	12508110
1	M2	Tilt Motor	Pelco	12508110
1	P1	Connector	AMP	CON206036-1
4	1-S4	Switch	Microswitch	SWI1SM1
28	—	Connector Pins	AMP	CON205840-3

Figure 28. PT1280SI/PP Wiring Diagram

## WARRANTY AND RETURN INFORMATION

### **WARRANTY**

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship for a period of one year after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years on FT/FR8000 Series fiber optic products.
- Three years on Genex<sup>®</sup> Series products (multiplexers, server, and keyboard).
- Three years on Camclosure<sup>®</sup> and fixed camera models, except the CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models, which have a five-year warranty.
- Two years on standard motorized or fixed focal length lenses.
- Two years on Legacy<sup>®</sup>, CM6700/CM6800/CM9700 Series matrix, and DF5/DF8 Series fixed dome products.
- Two years on Spectra<sup>®</sup>, Esprit<sup>®</sup>, ExSite<sup>™</sup>, and PS20 scanners, including when used in continuous motion applications.
- Two years on Esprit<sup>®</sup> and WW5700 Series window wiper (excluding wiper blades).
- Eighteen months on DX Series digital video recorders, NVR300 Series network video recorders, and Endura<sup>™</sup> Series distributed network-based video products.months on DX Series digital video recorders, NVR300 Series network video recorders, Endura<sup>™</sup> Series distributed network-based video products, and TW3000 Series twisted pair transmission products.
- One year (except video heads) on video cassette recorders (VCRs). Video heads will be covered for a period of six months.
- Six months on all pan and tilt, scanners or preset lenses used in continuous motion applications (that is, preset scan, tour and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to Pelco, Clovis, California. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental or consequential damages (including loss of use, loss of profit and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, Sales Order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product which does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

### **RETURNS**

In order to expedite parts returned to the factory for repair or credit, please call the factory at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair).

All merchandise returned for credit may be subject to a 20% restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid. Ship to the appropriate address below.

If you are located within the continental U.S., Alaska, Hawaii or Puerto Rico, send goods to:

Service Department  
Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699

If you are located outside the continental U.S., Alaska, Hawaii or Puerto Rico and are instructed to return goods to the USA, you may do one of the following:

If the goods are to be sent by a COURIER SERVICE, send the goods to:

Pelco  
3500 Pelco Way  
Clovis, CA 93612-5699 USA

If the goods are to be sent by a FREIGHT FORWARDER, send the goods to:

Pelco c/o Expeditors  
473 Eccles Avenue  
South San Francisco, CA 94080 USA  
Phone: 650-737-1700  
Fax: 650-737-0933

## **REVISION HISTORY**

<b>Manual #</b>	<b>Date</b>	<b>Comments</b>
C373SM	1/99	Original version.
C373SM-A	8/01	Revised description of PT1260EX Series and changed part numbers for the pan shaft bearings and the tilt shaft in the parts list. Reference ECO #01-7128.

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